HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SERVICE MANUAL — DA-4X CHASSIS

MODEL NAME	*REMOTE COMMANDER*	*DESTINATION*	*CHASSIS NO.*
KP-57WV600	*RM-Y188*	*US/CND*	*SCC-P92D-A*
KP-57WV700	*RM-Y188*	*US/CND*	*SCC-P92B-A*
KP-65WV600	*RM-Y188*	*US/CND*	*SCC-P92C-A*
KP-65WV700	*RM-Y188*	*US/CND*	*SCC-P92A-A*

ORIGINAL MANUAL ISSUE DATE: 6/2002

ALL REVISIONS AND UPDATES TO THE ORIGINAL MANUAL ARE APPENDED TO THE END OF THE PDF FILE.

REVISION DATE	REVISION TYPE	SUBJECT
6/2002	No revisions or updates are applicable at this time.	
7/2002	Re-release Manual	Revised Service Data List (pgs. 21, 22, 25, 43, 44, 45) Revised Circuit Boards Location (pg. 60) to include U Board and UD Board Removed Shade(B) (pg. 110)
8/2002	Correction-1	Revised Exploded View Cover diagrams to reflect accurate position of Contrast Screen Assembly. (pgs.107 & 108)
10/2002	Correction-2	Corrected P/N for Rear Boards on Exploded View Cover parts list, and added P/N for Mirror Cover. (pg.107)
11/2002	Supplement-1	Replaced MS1 Board with BM1C Board, Updated AD Board and D Board, Updated Exploded View P/Ns, Updated Parts List
1/2003	Correction-3	Convergence Adjustment Procedure (pgs. 48 & 52)
1/2003	Correction-4	Corrected P/N for Caster on Exploded View Chassis parts list. (pg.109)1/2003
9/2003	Correction-5	Corrected A PWB Component and Conductor side (pg. 75& 76))
10/2004	Removed Note from section 2-12-1. Setup For Adjustment. Note is intended for use by the factory during production, and should not be performed by service technicians.Replaced Pg. 48 with Pg. 48	

COLOR REAR VIDEO PROJECTOR

SONY®

9-965-926-09

Self Diagnosis Supported model

SERVICE MANUAL

DA-4X CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-57WV600	RM-Y188	US/CND	SCC-P92D-A
KP-57WV700	RM-Y188	US/CND	SCC-P92B-A
KP-65WV600	RM-Y188	US/CND	SCC-P92C-A
KP-65WV700	RM-Y188	US/CND	SCC-P92A-A



KP-57WV600



RM-Y188

COLOR REAR VIDEO PROJECTOR

SONY

9-965-926-09

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SPECIFICATIONS

Power Requirements 120V AC, 60Hz

Power Consumption (W)
In Use (Max) 295W
In Standby 1 W

Inputs/Outputs

DVI-HDTV
1 terminal, 3.3V T.M.D.S., 50 ohms
The DVI-HDTV input terminal is compliant with the EIA-861 standard and is not intended for use with personal computers.

Video (IN)
4 total (1 on front panel)
1Vp-p, 75ohms unbalanced, sync negative

S Video (IN)
3 total (1 on front panel)
Y: 1Vp-p, 75ohms unbalanced, sync negative
C: 0.286Vp-p (Burst signal), 75ohms

Audio (IN)
7 total (1 on front panel)
500 mVrms (100% modulation)
Impedance:47 kilohm

Component Video Input
2 total
Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative;
P_B: 0.7 Vp-p, 75 ohms;
P_R: 0.7 Vp-p, 75 ohms

Control S (IN/OUT)
Variable/Fixed Audio (OUT)
More than 408 m Vrms at the maximum volume setting (Variable)
More than 408 m Vrms (Fixed) Impedance (output):2 kilohms

	KP-57WV600 KP-57WV700	KP-65WV600	KP-65WV700
Speaker Output (W)	20W x 2		
Dimensions (W x H x D) **mm** **in**	1361 x 1394 x 689 mm $53^{5/8}$ x $54^{15/16}$ x $27^{1/8}$ in	1542 x 1516 x 735 mm $60^{3/4}$ x $59^{3/4}$ x $28^{15/16}$ in	
Mass kg **lbs**	98 kg 216 lbs	136 kg 300 lbs	134 kg 295 lbs

Projection System
3 picture tubes, 3 lenses, horizontal in-line system

Picture Tube
7-inch high-brightness monochrome tubes (6.3 raster size), with optical coupling and liquid cooling system.

Projection Lenses
High performance, large diameter hybrid lens F1.1

Antenna
75 ohm external terminal for VHF/UHF

Television System
NTSC, American TV Standard

Channel Coverage
VHF: 2-13/ VHF: 14-69/ CATV: 1-125

Screen Size (measured diagonally)
57 inches (KP-57WV600/57WV700)
65 inches (KP-65WV600/65WV700)

Supplied Accessories
Remote Control RM-Y188
Batteries (2) size AA (R6)

Optional Accessories
A/V Cable (VMC-810/820/830 HG)
Audio Cable (RKC-515HG)
Component Video Cable (VMC-10/30 HG)
Control S Cable (RK-G69HG)
Memory Stick media:
8 MB (MSA-8A)
16 MB (MSA-16A)
32 MB (MSA-32A)
64 MB (MSA-64A)
128 MB (MSA-128A)

Design and specifications are subject to change without notice.

WARNINGS AND CAUTIONS

CAUTION

Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield, or carbon painted on the CRT, after removing the anode.

WARNING!!

An isolation transformer should be used during any service to avoid possible shock hazard, because of live chassis. The chassis of this receiver is directly connected to the ac power line.

⚠ SAFETY-RELATED COMPONENT WARNING!!

Components identified by shading and ⚠ mark on the schematic diagrams, exploded views, and in the parts list are critical for safe operation. Replace these components with Sony parts whose part numbers appear as shown in this manual or in supplements published by Sony. Circuit adjustments that are critical for safe operation are identified in this manual. Follow these procedures whenever critical components are replaced or improper operation is suspected.

ATTENTION!!

Apres avoir deconnecte le cap de l'anode, court-circuiter l'anode du tube cathodique et celui de l'anode du cap au chassis metallique de l'appareil, ou la couche de carbone peinte sur le tube cathodique ou au blindage du tube cathodique.

Afin d'eviter tout risque d'electrocution provenant d'un châssis sous tension, un transformateur d'isolement doit etre utilisé lors de tout dépannage. Le châssis de ce récepteur est directement raccordé à l'alimentation du secteur.

⚠ ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

Les composants identifies par une trame et par une marque ⚠ sur les schemas de principe, les vues explosees et les listes de pieces sont d'une importance critique pour la securite du fonctionnement. Ne les remplacer que par des composants Sony dont le numero de piece est indique dans le present manuel ou dans des supplements publies par Sony. Les reglages de circuit dont l'importance est critique pour la securite du fonctionnement sont identifies dans le present manuel. Suivre ces procedures lors de chaque remplacement de composants critiques, ou lorsqu'un mauvais fonctionnement suspecte.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.

2. Check the interboard wiring to ensure that no wires are "pinched" or touching high-wattage resistors.

3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.

4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.

5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.

6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.

7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.

8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson's 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

How to Find a Good Earth Ground

A cold-water pipe is a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms.

If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble-light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

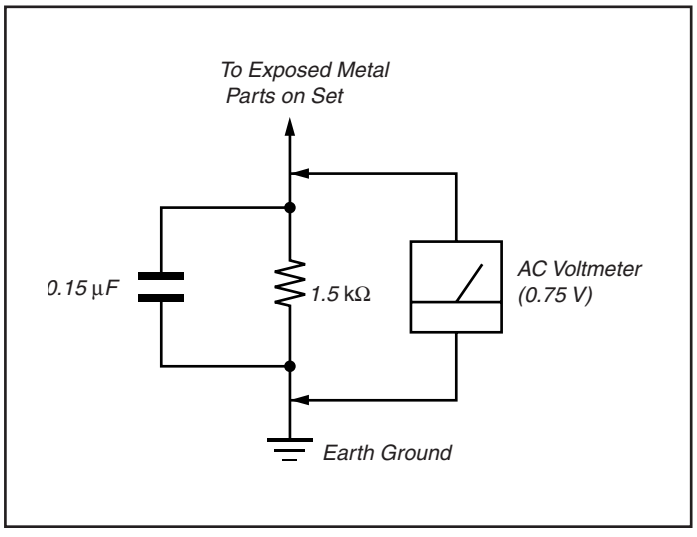


Figure A. Using an AC voltmeter to check AC leakage.

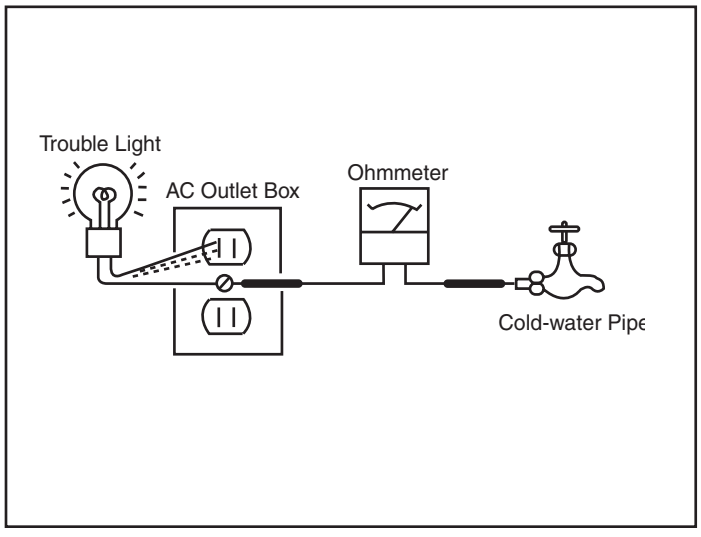


Figure B. Checking for earth ground.

SELF-DIAGNOSTIC FUNCTION

Self Diagnosis Supported model

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER LED flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the Remote Commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

Diagnostic Test Indicators

When an error occurs, the STANDBY/TIMER LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.

Results for all of the following diagnostic items are displayed on screen. If the screen displays a "0", no error has occurred.

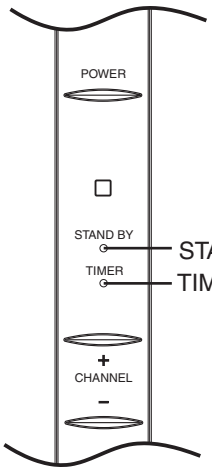
Diagnostic Item	No. of times STANDBY / TIMER lamp flashes	Display Result	Probable Cause Location	Detected Symptoms
Power does not turn on	Does not light	_____	• Power cord is not plugged in. • Fuse is burned out (F501). (A Board)	• Power does not come on. • No power is supplied to the TV. • AC Power supply is faulty.
+B Overcurrent (OCP)*	2 times	2:0 or 2:1	• H.OUT (Q8024) is shorted. (D Board) • +B PWM (Q8035) is shorted. (D Board)	• Power does not come on. • Load on power line shorted.
Low +B Overvoltage (OVP)	3 times	3:0 or 3:1	• IC6504 is faulty. (D Board)	• Has entered standby mode.
Vertical Deflection Stopped	4 times	4:0 or 4:1	• 15V is not supplied. (D Board) • IC8003 is faulty. (D Board)	• Has entered standby mode after Horizontal raster. • Vertical deflection pulse is stopped. • Power line is shorted or power supply is stopped.
White Balance Failure (not balanced)	5 times	5:0 or 5:1	• Video OUT (IC9101, IC9201, IC9301) is faulty. (CR, CG, CB Board) • CRT drive (IC2801) is faulty. (B Board) • G2 is improperly adjusted.**	• No raster is generated. • CRT cathode current detection reference pulse output is small.
LOW +B OCP/OVP (overcurrent/overvoltage)***	6 times	6:0 or 6:1	• +5 line is overloaded. (A, B, M Boards) • +5 line is shorted. (A, B, M Boards) • IC504 is faulty. (A Board)	• No picture
Horizontal Deflection Stopped	7 times	7:0 or 7:1		• No picture

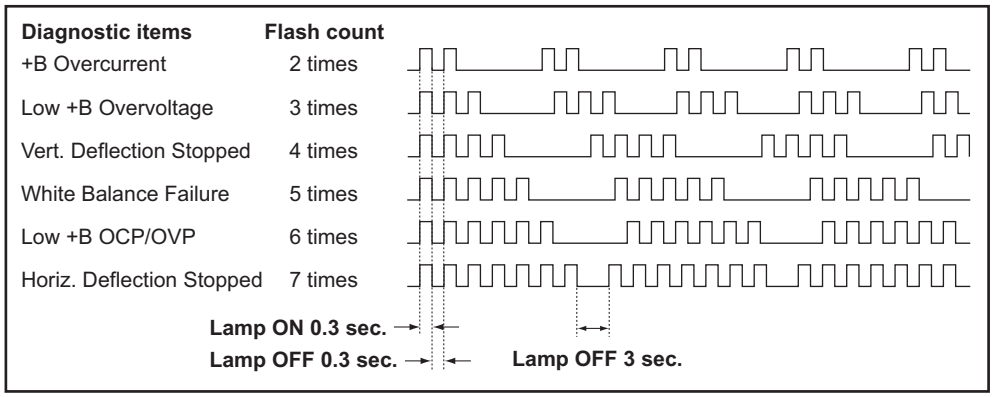
* If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously. The symptom that is diagnosed first by the microcontroller is displayed on the screen.

** Refer to Screen (G2) Adjustment (Fine Adjustments) in Section 2 of this manual.

*** If STANDBY/STEREO LED flashes six (6) times, unplug the unit and wait 10 seconds before performing the adjustment.

Display of Standby/Timer LED Flash Count





Release of TIMER STAND BY indicator blinking

The TIMER/STANDBY indicator blinking display is released by turning OFF the power switch on the TV main unit or removing the plug from the power.

Self-Diagnosis Screen Displays

In cases of malfunctions where it is not possible to determine the symptom such as when the power goes off occasionally or when the screen disappears occasionally, there is a screen display on whether the malfunction occurred or not in the past (and whether the detection circuit operated or not) in order to allow confirmation.

Screen Display Method

Quickly press the remote command button in the following order from the standby state.

Display ⟶ Channel 5 ⟶ Sound Volume* − ⟶ Power ON

*Note that this differs from entering the service mode (sound volume +)

SELF DIAGNOSIS	
2: +B OCP	0
3: +B OVP	0
4: VSTOP	0
5: AKB	1
6: LOWB	0
7: H-STOP	0
101: WDT	24

Numeral “0” means that no fault was detected.

Numeral “1” means a fault was detected one time only.

Self-Diagnosis Screen Display

The results display is not automatically cleared. In case of repairs and after repairs, check the self-diagnosis screen and be sure to return the results display to “ 0 ”.

If the results display is not returned to “ 0 ” it will not be possible to judge a new malfunction after completing repairs.

Method of Clearing Results Display

1. Power off (Set to the stanby mode.)
2. Display ⟶ Channel 5 ⟶ Sound Volume + ⟶ Power ON (Service Mode)
3. Channel 8 ⟶ ENTER (Test reset = Factory preset condition)

Method of Ending Self Diagnosis Screen

When ending the self-diagnosis screen completely, turn the power switch OFF on the remote commander or the main unit.

Self-Diagnosis Function Operation

+B overcurrent (OCP)
Occurs when excessive current flows through R5013. The increase in voltage across R5013 causes the output of Q5004 to go high, and this high signal goes to the micro.

+B overvoltage (OVP)
IC6505 detects +B OVP condition and turns on Q6522. This sends a high signal to the micro and also shuts down the AC relay.

V-STOP
Occurs when an absence of the vertical deflection pulse is detected by pin 24 of IC2801 (B Board). Power supply will shut down when waveform interval exceeds 2 seconds.

White Balance Failure
If the RGB levels* do not balance within 2 seconds after the power is turned on, this error will be detected by IC2801. TV will stay on, but there will be no picture.

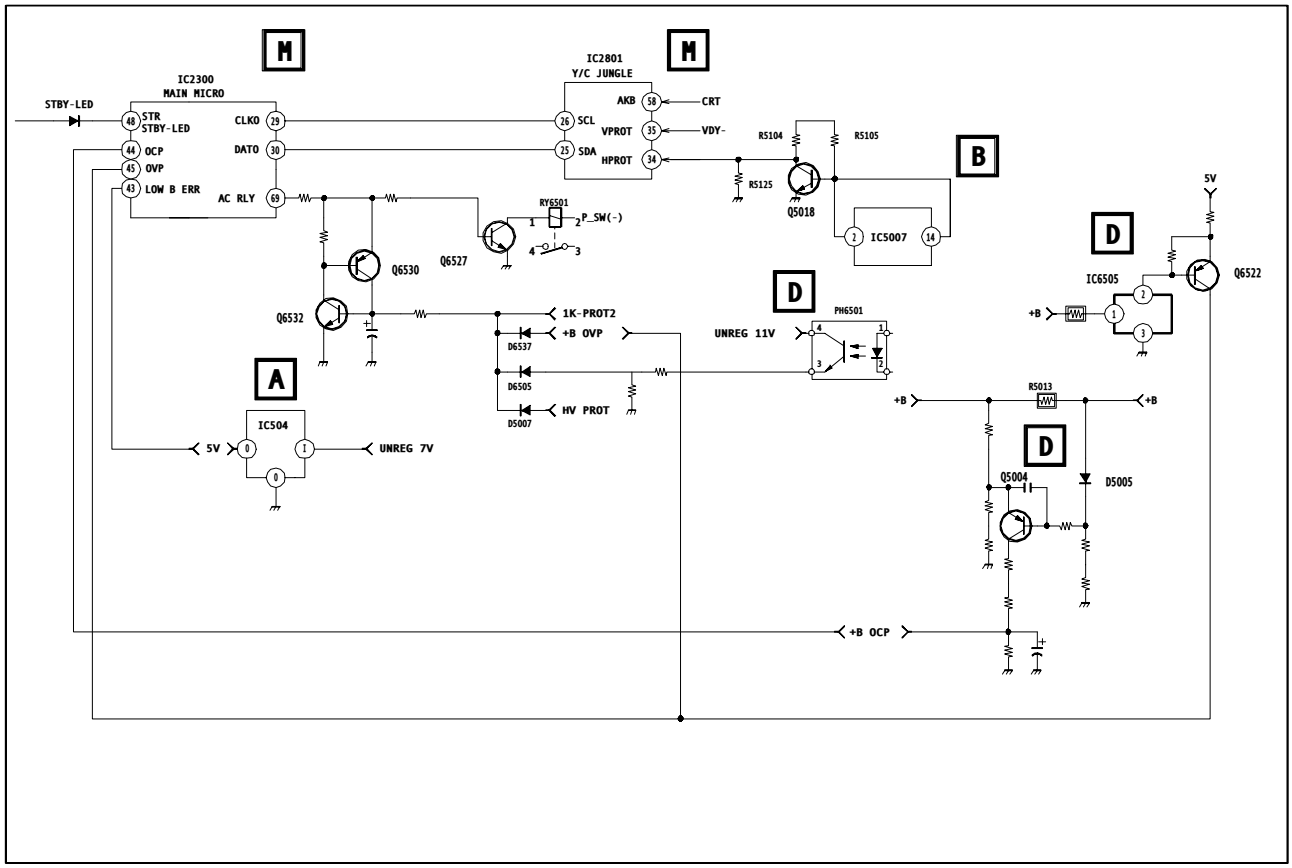
*(Refers to the RGB levels of the AKB detection Ref pulse that detects 1K).

Low B OCP/OVP
Occurs when set 5V is out.

Horizontal Deflection Stopped
Occurs when either:

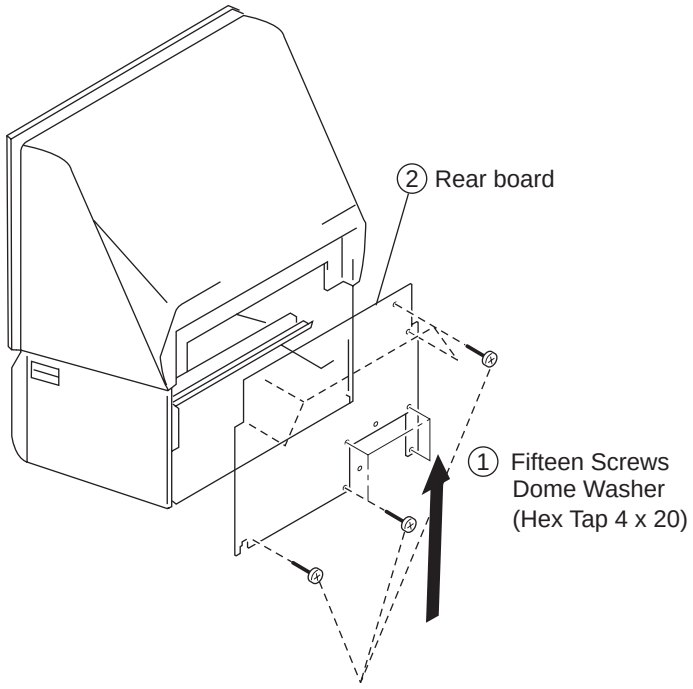
1) a +B overcurrent is detected (IC5007), or
2) overheating is detected (Thermistor TH5002).

Self-Diagnosis Block Diagram

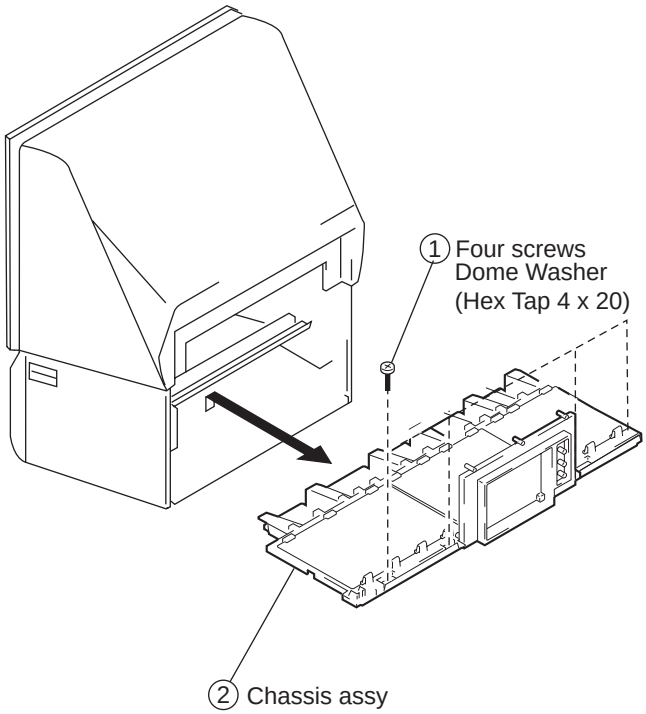


SECTION 1: DISASSEMBLY

1-1. REAR BOARD REMOVAL



1-2. CHASSIS ASSEMBLY REMOVAL

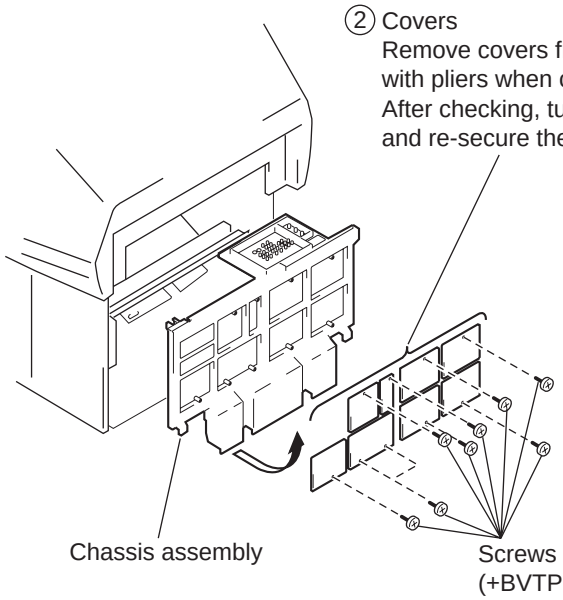


1-3. SERVICE POSITION

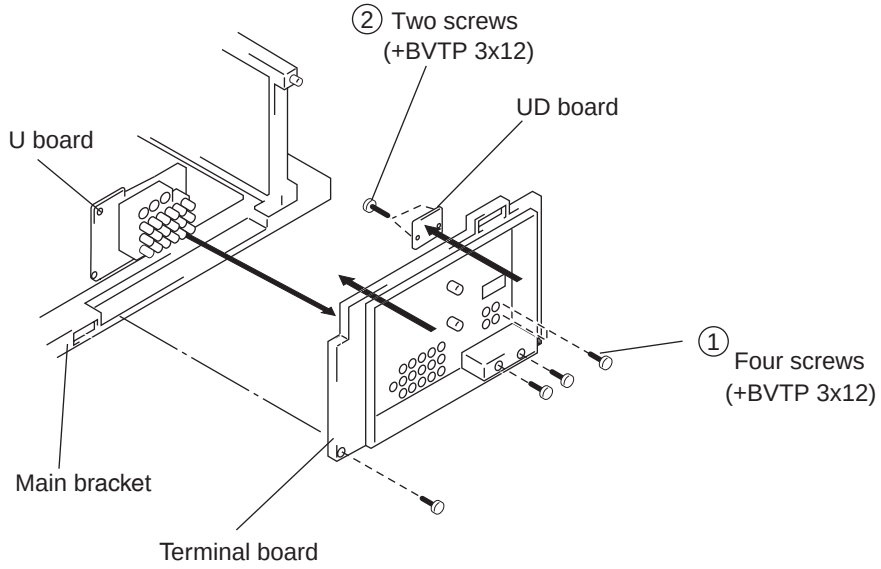
① Free wiring from purse locks.
NOTE: Observe wire dress
and return to original condition.

② Covers
Remove covers from chassis assembly
with pliers when checking printed circuit boards.
After checking, turn the covers over
and re-secure them with the screws.

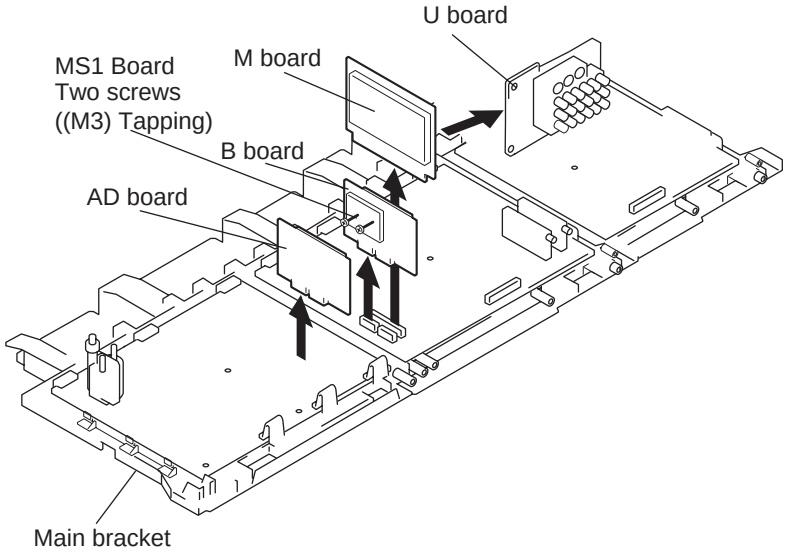
③ When plugging in connector from
HM Board to B Board at CN3603
insure two brown wires are facing
upward towards the HV block
assembly.



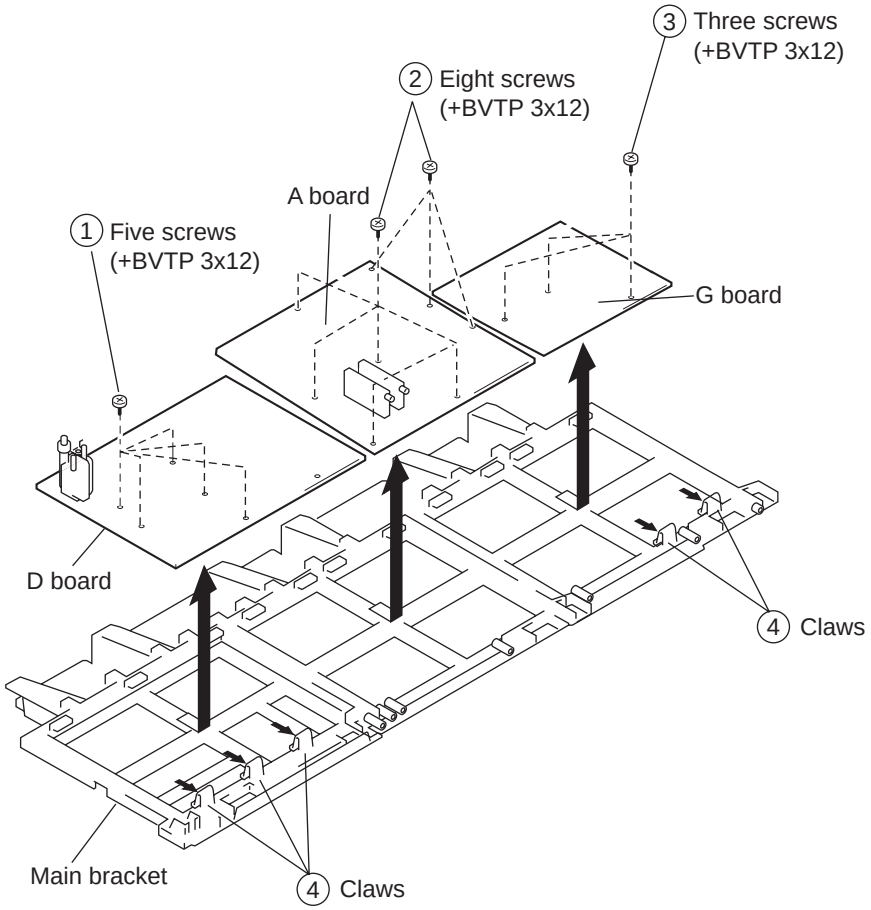
1-4. TERMINAL BOARD AND UD BOARD REMOVAL



1-5. AD BOARD, B BOARD, M BOARD, MS1 BOARD, AND U BOARD REMOVAL

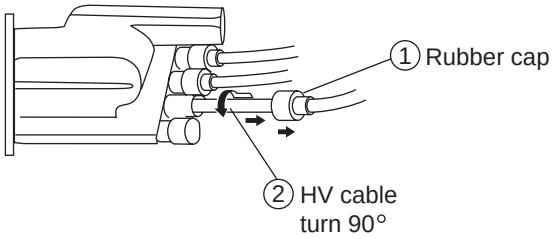


1-6. D BOARD, A BOARD, AND G BOARD REMOVAL

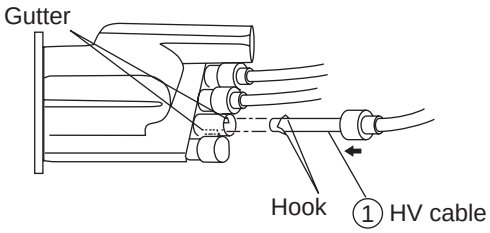


1-7. HIGH-VOLTAGE CABLE INSTALLATION AND REMOVAL

(1) Removal

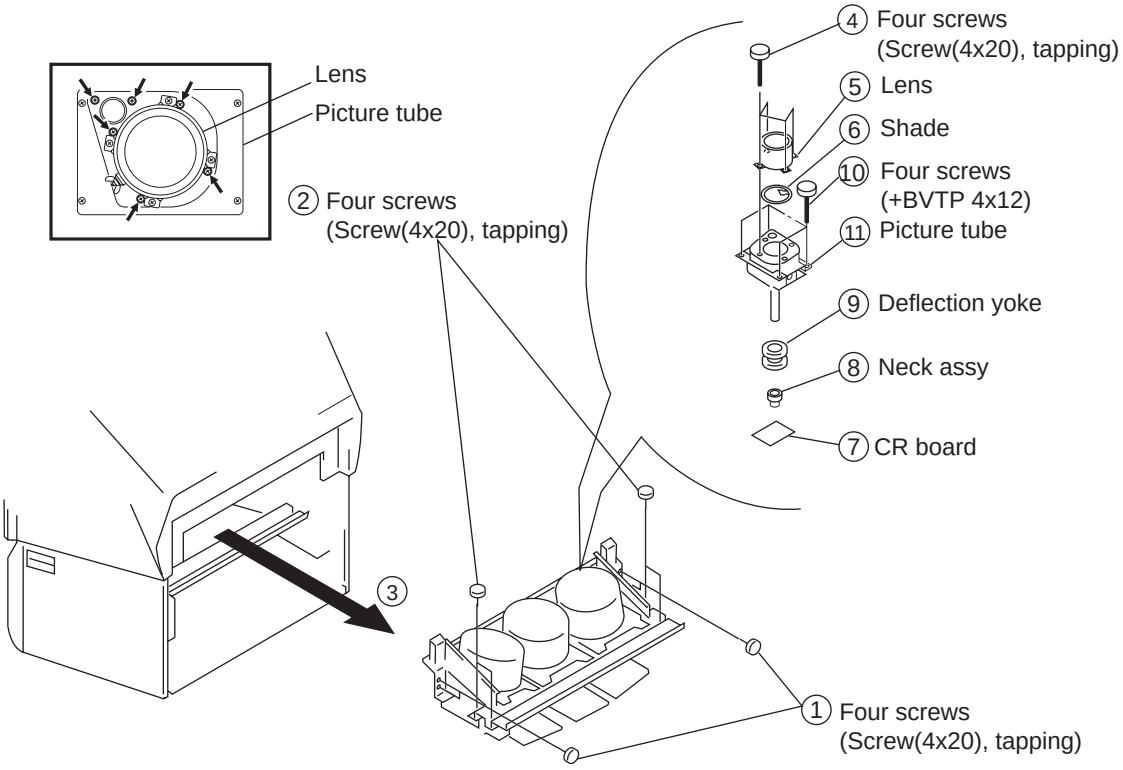


(2) Installation

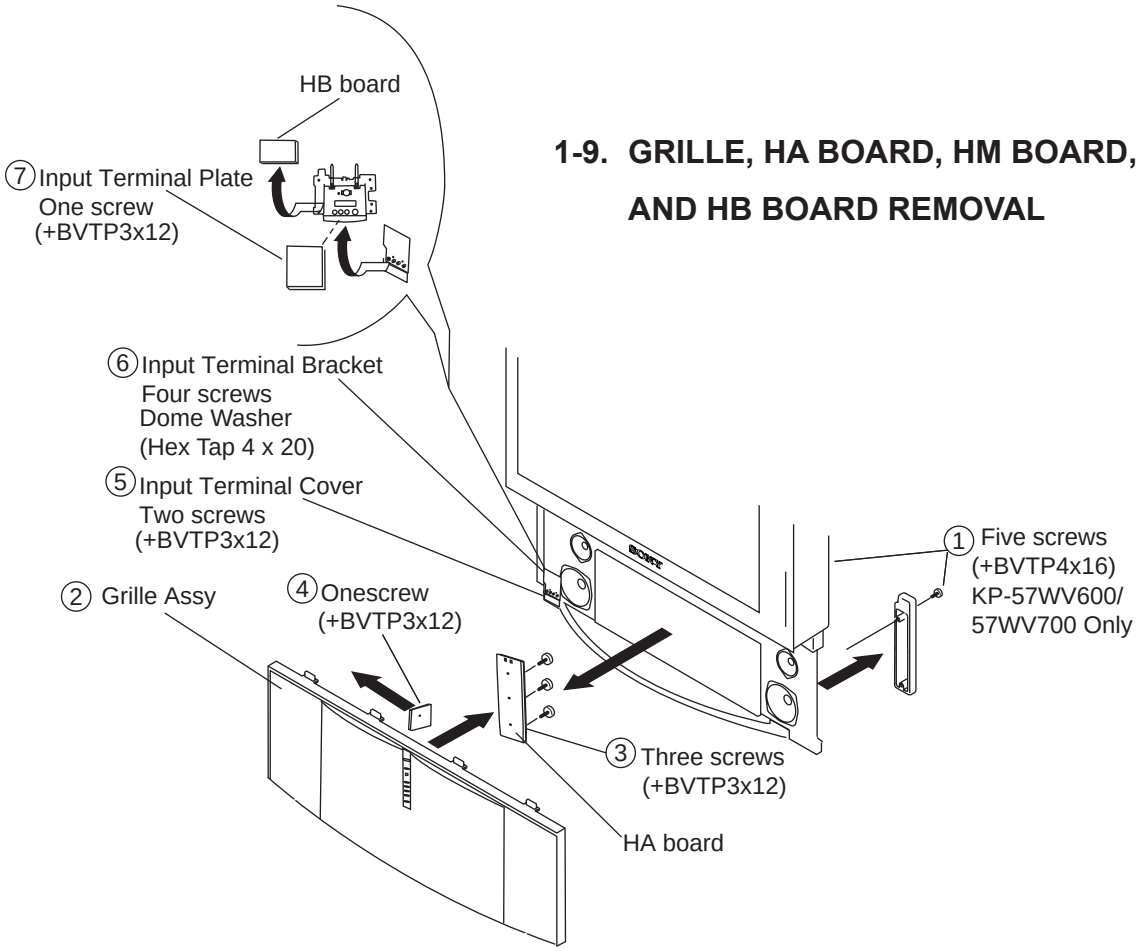


1-8. PICTURE TUBE REMOVAL

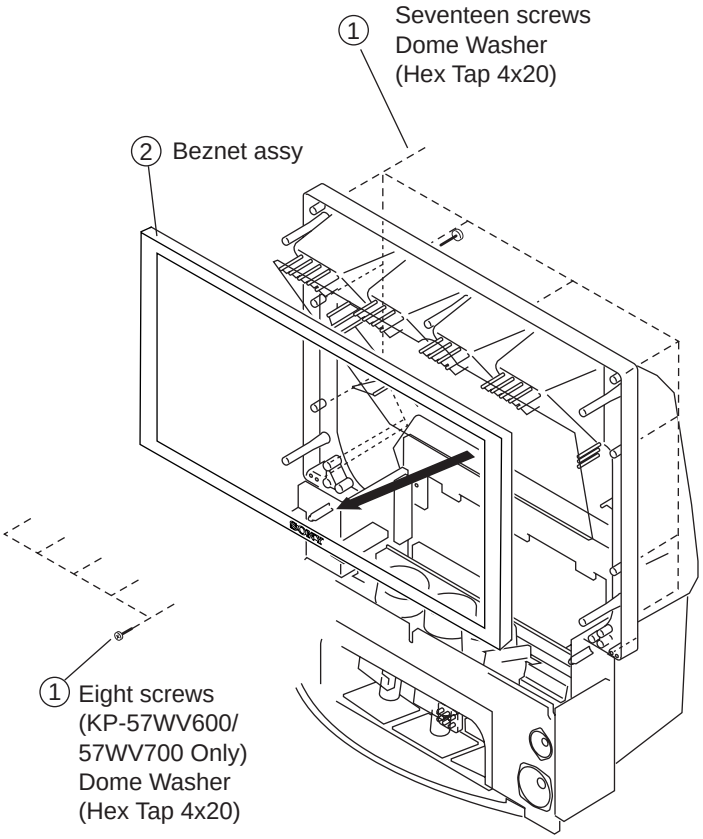
CAUTION: Removing the arrow-marked screws is strictly prohibited. If removed, it may cause liquid to spill.



1-9. GRILLE, HA BOARD, HM BOARD, AND HB BOARD REMOVAL

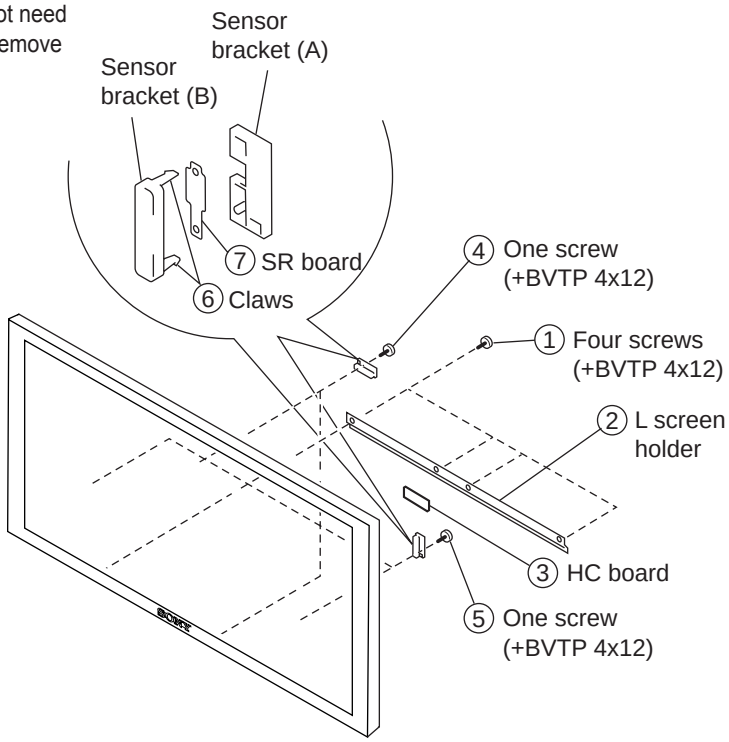


1-10. BEZNET ASSEMBLY REMOVAL

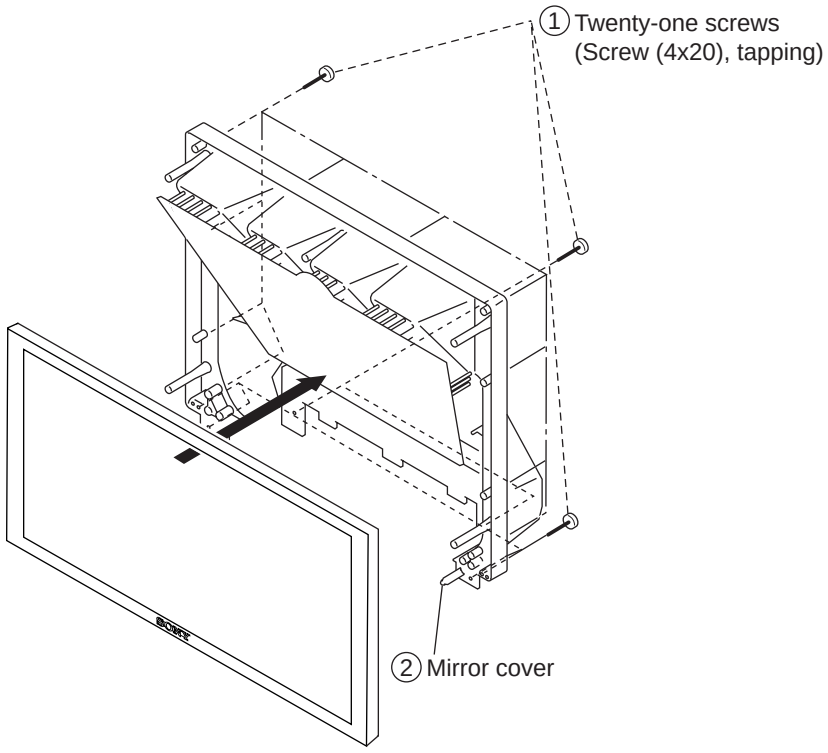


1-11. SR BOARD REMOVAL

The Screen Holder does not need to be removed in order to remove the SR boards.



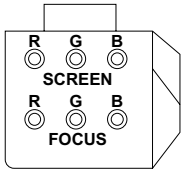
1-12. MIRROR COVER REMOVAL (KP-57WV600/57WV700 ONLY)



SECTION 2: SET-UP ADJUSTMENTS

2-1. SCREEN VOLTAGE ADJUSTMENT (G2) (COARSE ADJUSTMENT)

1. Receive the Monoscope signal..
2. Set BRIGHTNESS to 50% and PICTURE to minimum.
3. Turn the red VR on the focus block all the way to the left and then gradually turn it to the right until the retrace line is barely visible.
4. Gradually turn the control to the left until the retrace line disappears.

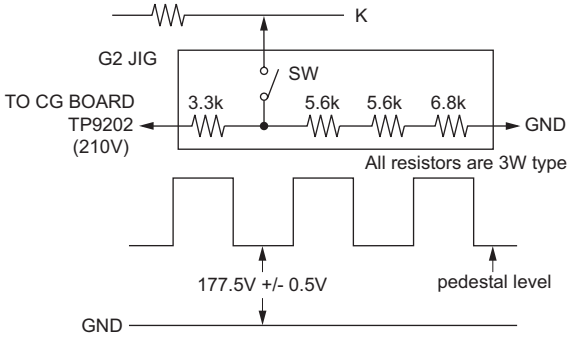


FOCUS Block

2-2. SCREEN (G2) ADJUSTMENT (FINE ADJUSTMENT)

If the jig described below is available, it is recommended that the G2 Fine Mode Adjustment be performed to set the screen controls to their optimal condition. If desired, you can build the jig illustrated below, using 3-watt resistors. Please note that if the proper voltage is not obtained with the listed resistor's values, then increase or decrease one of the values in the resistor network to obtain the correct voltage.

1. Select VIDEO-1 mode no signal applied (the screen must be black).
2. Connect the G2 JIG.
3. SW on JIG.
4. Connect an oscilloscope to the TP9101(KR), TP9201(KG) and TP9301(KB) of CR board, CG board, and CB board.
5. Adjust red, green, and blue screen voltage to 177.5+/-0.5V with screen VR on the focus block.

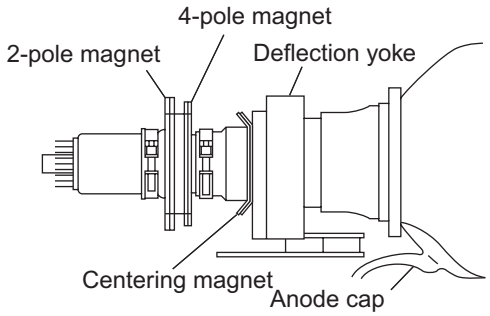


2-3. DEFLECTION YOKE TILT ADJUSTMENT

1. Connect the color bar generator monoscope patter to Video 1 input.
2. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
3. Loosen the CRT's deflection yoke set screw and align the tilt of the deflection yoke so that the horizontal bars at the center of the cross-hatch pattern are parallel to the top and bottom edges of the screen.
4. After aligning the deflection yoke fasten it securely to the funnel-shaped portion (neck) of the CRT.
5. Cover the green and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps), then repeat steps 3 and 4 for the red CRT.

   Cover the green and red CRT lenses with lens caps o allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps), then repeat steps 3 and 4 for the blue CRT.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2170P-2 RGBS.

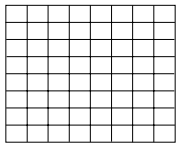


2-4. FOCUS LENS ADJUSTMENT

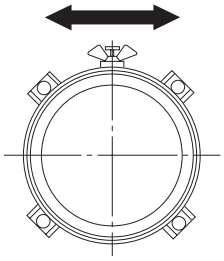
In this adjustment, use the remote commander while in service mode. For details on the usage of the service mode and the remote commander, please refer to section
2-10. ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER.

1. Loosen the lens screw.
2. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
3. Turn the green lens to adjust to the optimum focus point with the crosshatch signal.
4. Tighten the lens screw.
5. Cover the green and blue CRT lenses with the lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
6. Turn the red lens to adjust to the optimum focus point with the crosshatch signal.
7. Tighten the lens screw.
8. Cover the green and red CRT lenses with the lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
9. Turn the blue lens to adjust to the optimum focus point with the crosshatch signal.
10. Tighten the lens screw.
11. After adjusting the items:
    2-5. FOCUS VR ADJUSTMENT,
    2-6. 2-POLE MAGNET ADJUSTMENT,
    2-8. 4-POLE MAGNET ADJUSTMENT,
    reconfirm the optimum focus point and adjust again if necessary.

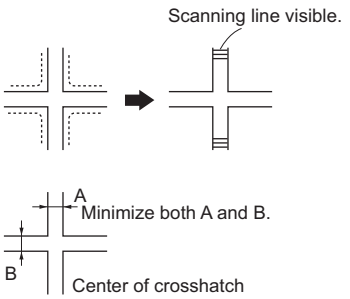
* In PJE mode, every time 6 is pressed, the test signal changes to: "crosshatch+video signal" → "crosshatch+borderline(black)" → "crosshatch(black)" → "dots(black)" → off



Test Signal



Lens

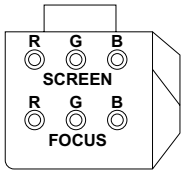


Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2170P-2 1 RGBS.

2-5. FOCUS VR ADJUSTMENT

1. Set generator to crosshatch.
2. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
3. Turn the green focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
4. Cover the green and blue picture lenses with lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
5. Turn the red focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
6. Cover the green and red picture lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
7. Turn the blue focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
8. After adjusting the items:
   2-4. FOCUS LENS ADJUSTMENT,
   2-6. 2-POLE MAGNET ADJUSTMENT,
   2-8. 4-POLE MAGNET ADJUSTMENT,
   reconfirm the optimum focus point and adjust again if necessary.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2170P-2 1 RGBS.

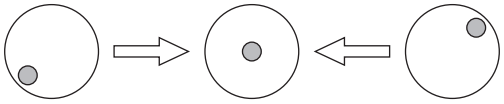


FOCUS Block

2-6. 2-POLE MAGNET ADJUSTMENT

1. Set the picture mode to PRO and picture to MAX.
2. Receive the Dot signal.
3. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
4. Turn the green focus VR on the focus block to the left (counter clockwise) and set it to overfocus to enlarge the spot.
5. Adjust the green CRT's 2-pole magnet so that the small bright spot is in the center.
6. Align the green focus VR on the focus block and set it for the best focus.
7. Repeat steps 1 through 6 for the red CRT except now you will cover the green and blue CRT lenses with lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps) and you will adjust the red focus control on the focus block.
8. Repeat steps 1 through 6 for the blue CRT except now you will cover the red and green CRT lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps) and you will adjust the blue focus control on the focus block.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2170P-2 1 RGBS.



2-7. CENTERING MAGNET ADJUSTMENT

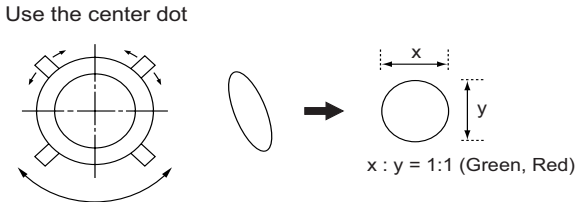
1. Set the picture mode to PRO.
2. Receive the monoscope signal.
3. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
4. Adjust the green CRT's centering magnet to put the center of the monoscope signal to the center of the screen.
5. Repeat steps 1 through 4 for the red CRT except now you will cover the green and blue CRT lenses with lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps) and you will adjust the red centering magnet.
6. Repeat steps 1 through 4 for the blue CRT except now you will cover the red and green CRT lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps) and you will adjust the blue centering magnet.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2170P-2 1 RGBS.

2-8. 4-POLE MAGNET ADJUSTMENT

1. Set the picture mode to PRO and picture to MAX.
2. Receive the Dot signal.
3. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
4. Turn the (green) focus VR on the focus block to the right (clockwise) and set it to under-focus to reduce the spot.
5. Adjust the 4-pole magnet so that the small spot in the center of the screen becomes round for green and red.
6. Adjust the blue spot to an oval shape X:Y=1:1.2
7. Repeat steps 1 through 6 for the red CRT except now you will cover the green and blue CRT lenses with lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps) and you will adjust the red focus control on the focus block.
8. Repeat steps 1 through 6 for the blue CRT except now you will cover the red and green CRT lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps) and you will adjust the blue focus control on the focus block.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2170P-2 1 RGBS.

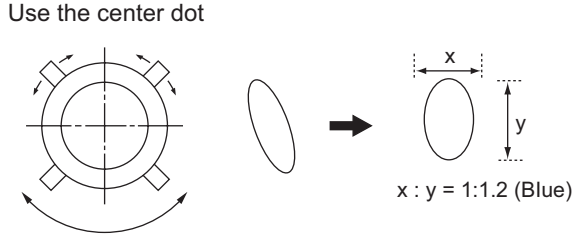


2-9. DEFOCUS ADJUSTMENT (BLUE)

Note: Adjust the blue dot to be slightly larger than red and green dots. This adjustment provides a more pleasing picture to the customer.

1. Set the picture mode to PRO.
2. Receive the Dot signal.
3. Cover the red and green CRT lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
4. Turn the blue focus VR on the focus block to the right (clockwise) to make the round dot elliptical.
5. Check the flare with a high luminance signal to make sure the flare is minimal while the dot shape is elliptical.
6. Set the generator to an all white signal and check uniformity.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2170P-2 1 RGBS.



2-10. ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER

All of the circuit adjustments can be made by using the remote commander (RM-Y188).

NOTE : The following test equipment is required:

1. Pattern Generator (with component outputs)
2. Frequency counter
3. Digital multimeter
4. Audio oscillator

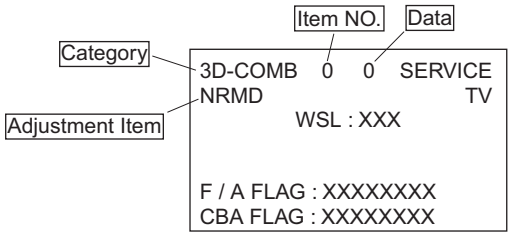
2-10-1. METHOD OF ENTERING THE SERVICE ADJUSTMENT MODE

SERVICE MODE PROCEDURE

1. TV must be in Standby mode. (Power off)
2. Press “DISPLAY”, “5”, “VOL +”, then “POWER” on the remote commander.

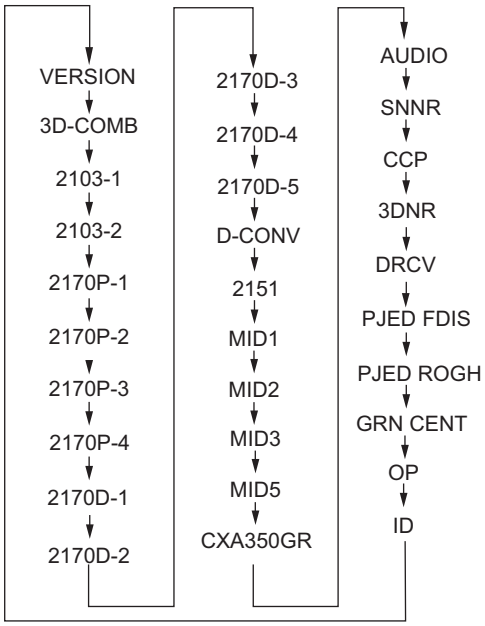
   (Press each button within 1 second of pressing the previous button.)

SERVICE MODE ADJUSTMENT



3. The screen displays the item being adjusted within that category.
4. Press 1 or 4 on the remote commander to select the adjustment item
5. Press 3 or 6 on the remote commander to change the data
6. Press 2 or 5 on the remote commander to select the adjustment category

   Every time you press 2(Category up), service mode changes in the order shown below:



7. If you want to go back to the most recently saved value, press “0” then “ENTER” to read the memory.
8. Press “MUTING” then “ENTER” to write the new adjustment data into memory.
9. Turn power off when you want to exit the service mode.

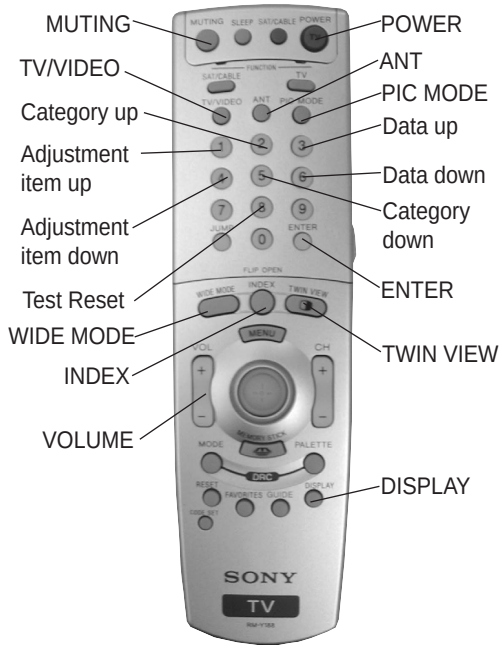
Note: Press “8” then “ENTER” on the remote commander to restore the factory settings for user controls and channel memories (this will also turn set off and then on to exit the service mode).

2-10-2. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, turn the power off with the remote commander.
2. Turn the power ON and set to service mode.
3. Cycle through the adjusted items again and confirm that the adjustments were saved.

2-10-3. ADJUSTING BUTTONS AND INDICATOR

Note: When the PJE mode (which displays an internally generated signal) is activated, several buttons on the remote commander will have different functions than the ones listed below. Therefore, when in the PJE mode, refer to section 2-12-3 for button functions.



RM-Y188

2-11 SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	DATA								
VERSION	0	VER	Software version display	0								
	1	DMY1		255								
3DCOMB	0	NRMD	Noise Reduction Mode	0								
	1	CLKS	Forced Clock System	1								
	2	NSDS	Non-Standard/Standard Signal Processing	0								
	3	MSS	Frame / Line Processing	0								
	4	KILS	Color Killer Setting	1								
	5	FRZE	External Memory Test Bit	0	♥ WV600 and WV700 are different							
	6	EXCS	External C Sync Input (CSI Pin)	1								
	7	CDL	C Signal Output Delay	3								
	8	DYCO	Y Motion Detection Coring	NRMD = 0	2	NRMD = 1	2	NRMD = 2	2	NRMD = 3	2	
	9	DYGA	Y Motion Detection Gain	NRMD = 0	10	NRMD = 1	10	NRMD = 2	10	NRMD = 3	10	
	10	DCCO	C Motion Detection Coring	NRMD = 0	5	NRMD = 1	5	NRMD = 2	5	NRMD = 3	5	
	11	DCGA	C Motion Detection Gain	NRMD = 0	5	NRMD = 1	5	NRMD = 2	5	NRMD = 3	5	
	12	WSC	Noise Detection Amount	1								
	13	WSS	Noise Detection Pre-Filter Type	0								
	14	VAPG	Vertical Apperature Gain	Vivid	0	Standard	0	Movie	0	Pro	0	
	15	VAPI	Vertical Apperature Convergence Point	Vivid	0	Standard	0	Movie	0	Pro	0	
	16	TEST	Test Bit	0								
	17	YPFT	Y Peaking BPF Center Frequency	RF	Vivid	3	Standard	3	Movie	3	Pro	3
				V1-V4	Vivid	3	Standard	3	Movie	3	Pro	3
				Twin	3							
	18	YPFG	Y Peaking BPF Gain	RF	Vivid	7	Standard	7	Movie	5	Pro	5
				V1-V4	Vivid	5	Standard	5	Movie (WV600) ♥	6	Pro	5
									Movie (WV700) ♥	5		
				Twin	7							
	19	SEDC	C Detection High-Freq Sensitivity	0								
	20	SEDY	Y Detection Low-Freq Sensitivity	1								
	21	YHCO	Y Output High-Freq Coring	WV700 ♥	2							
				WV600 ♥	3							
	22	YHCG	Y Output High-Freq Gain	0								
	23	SYSP	System Power-down Mode	0								
	24	TES2	Test Bits	0								

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	DATA
CXA2103-1	0	YLEV	Y-out input/output gain	RF, V1-V4: 17 / Others ♣: 16
	1	CLEV	CbCr input/output gain	RF, V1-V4: 15 / Others ♣: 21
Main YCT	2	SCON	Sub Contrast	V1-V4 ♣: 9 / Others ♠: 9
	3	SCOL	Sub Color	V1-V4 ♣: 2 / Others ♠: 2
	4	SHUE	Sub Hue	V1-V4 ♣: 5 / Others ♠: 11
	5	YDLY	Y/C Delay	V1-V4: 0 / Others: 0
	6	SHAP	Sharpness level	V1-V4 (WV600) ♥: 11 / V1-V4 (WV700) ♥: 8 / V5, V6 (480i): 4 / V7 (480i): 4 / Others (WV600 ♥): 11 / Others (WV700 ♥): 6
	7	SHF0	Sharpness f0	V1-V4: 0 / V5, V6 (480i): 3 / V7 (480i): 3 / Others: 0
	8	PREO	Sharpness preshoot:overshoot ratio	V1-V4: 3 / V5, V6 (480i): 3 / V7 (480i): 3 / Others: 3
	9	BPF0	Chroma band-pass filter f0 setting	3
	10	BPFQ	Chroma band-pass filter Q setting	0
	11	BPSW	Chroma band-pass filter ON/OFF	V1-V4: 0 / Others: 1
	12	TRAP	Y block chroma trap ON/OFF	0
	13	LPF	YCbCr output low-pass filter ON/OFF	1
	14	AFCG	H block PLL loop gain	V1-V4: 0 / RF: 1 / Others: 0
	15	CDMD	V countdown system mode	V1-V4: 3 / RF: 3 / Others: 3
	16	SSMD	Sync separation circuit	V1-V4: 0 / RF: 0 / Others: 0 / No Signal / Blanking: 3
	17	HMSK	Macrovision signal masking ON/OFF	V1-V4: 1 / V5, V6 (480i): 1 / V7 (480i): 0 / Others: 1
	18	HALI	H automatic adjustment function	0
	19	PPHA	Video and H TIM phase adjustment	V1-V4: 7 / V5, V6: 7 / V7 (480i): 7 / Others: 7
	20	CBO1	Cb offset of Cb IN (pin 34) input	V5, V6 (480i): 36 / Others: 34
	21	CRO1	Cr offset of Cr IN (pin 35) input	V5, V6 (480i): 38 / Others: 32
	22	CBO2	Cb offset of DVI Cb (Pin 38) input	25
	23	CRO2	Cr offset of the DVI Cr (Pin 39) input	27
	24	ATPD	Auto-Pedestal Point (Data is applied to 2103-2 also)	Single Picture: 0 / Twin: 2170P-4:BLK = 0: 0 / Twin ♥ 2170P-4:BLK = 1: WV600 1, WV700 3 / Twin 2170P-4:BLK = 2: 0 / Twin 2170P-4:BLK = 3: 0
	25	DCTR	DC transmission ratio (Data is applied to 2103-2 also)	Single Picture: 0 / Twin 2170P-4:BLK = 0: 0 / Twin ♥ 2170P-4:BLK = 1: WV600 2, WV700 3 / Twin 2170P-4:BLK = 2: 0 / Twin 2170P-4:BLK = 3: 0
CXA2103-2	0	YLEV	Y-out input/output gain	DRC* ♣: 14 / VDO*: 45
	1	CLEV	CbCr input/output gain	DRC* ♣: 7 / VDO*: 25
Sub-YCT	2	SCON	Sub Contrast	V1-V4** ♣: 9 / Others** ♠: 9
	3	SCOL	Sub Color	V1-V4** ♣: 2 / Others** ♠: 2
	4	SHUE	Sub Hue	V1-V4** ♣: 5 / Others** ♠: 11
	5	YDLY	Y/C Delay	V1-V4**: 0 / Others**: 0
	6	SHAP	Sharpness level	V1-V4**: 6 / Others**: 6
	7	SHF0	Sharpness f0	V1-V4**: 0 / Others**: 0
	8	PREO	Sharpness preshoot:overshoot ratio	V1-V4**: 3 / Others**: 3
	9	BPF0	Chroma band-pass filter f0 setting	3
	10	BPFQ	Chroma band-pass filter Q setting	0
	11	BPSW	Chroma band-pass filter ON/OFF	V1-V4**: 0 / Others**: 0
	12	TRAP	Y block chroma trap ON/OFF	0
	13	LPF	YCbCr output low-pass filter ON/OFF	DRC*: 0 / VDO*: 0
	14	AFCG	H block PLL loop gain	V1-V4**: 0 / Others**: 1
	15	CDMD	V countdown system mode	V1-V4**: 3 / Others**: 3
	16	SSMD	Sync separation circuit	V1-V4**: 0 / Others**: 0
	17	HMSK	Macrovision signal masking ON/OFF	V1-V4**: 1 / Others**: 0
	18	HALI	H auto adjustment function	0
	19	PPHA	Video and H TIM phase adjustment	V1-V4**: 7 / Others**: 7
	20	CBO1	Cb offset of Cb IN (pin 34) input	29
	21	CRO1	Cr offset of Cr IN (pin 35) input	26

♣ Adjustable - M Board CBA
♦ Adjustable - B Board CBA
♠ Adjustable - On Line (STD LIST)

♥ WV600 and WV700 are different

* DRC - Left picture of twin view is 480P, 720P, or 1080i input
* VDO - Left picture of twin view is 480i input

** Refers to the right picture of twin view

♣ Adjustable - M Board CBA
♦ Adjustable - B Board CBA
♠ Adjustable - On Line (STD LIST)

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	DATA													
CXA2170P-1	0	YOSW	Y Offset Switch	RF, V1-4	1	480i (V5, V6)	0	HD (V5,V6)	0	MS	0	V7	1				
	1	TCOF		0													
				RF, V1-V4	V5-7 480i	V5/V6 480P	V5/V6 720P	V5/V6 1080i	V7 480P	V7 VGA	V7 720P	V7 1080i	MS				
	2	YOF	Y offset	0	15	7	7	7	0		0		7				
	3	CBOF	Cb offset	44 ♠	44	44	47	44	40		41		34				
	4	CROF	Cr offset	44 ♠	44	44	47	44	42		42		34				
	5	SBRT	SUB brightness	Neutral Temp ♠		20	*SBRT is offset from adjust point (57WV700: +4, 65WV700: +6, 57WV600: +6, 65WV600: +4)										
	6	RDRV	R drive gain	Neutral Temp ♠		45											
	7	GDRV	G drive gain	Neutral Temp		30											
	8	BDRV	B drive gain	Neutral Temp ♠		34											
	9	RCUT	R cut-off	Neutral Temp ♠		41											
	10	GCUT	G cut-off	Neutral Temp		41											
	11	BCUT	B cut-off	Neutral Temp ♠		35											
	12	WBSW	White balance offset	Warm Temp		0	Cool Temp	0	Neutral Temp	0							
	13	SBOF	Sub brightness offset-ColorTemp.	Warm Temp		7	Cool Temp	7									
	14	RDOF	RDRV offset	Warm Temp		34	Cool Temp	34									
	15	GDOF	GDRV offset	Warm Temp		31	Cool Temp	31									
	16	BDOF	BDRV offset	Warm Temp		25	Cool Temp	34									
	17	RCOF	RCUT offset	Warm Temp		33	Cool Temp	32									
	18	GCOF	GCUT offset	Warm Temp		31	Cool Temp	31									
	19	BCOF	BCUT offset	Warm Temp		27	Cool Temp	45									
	20	DCOL	Dynamic Color for Cool	Cool Temp		2	Others	0									
CXA2170P-2	0	PICO	Picture+Ref.pulse on/off for G2 adj.	1													
	1	RGBS	RGB CRT ON/OFF combinations	7													
	2	BLKB	Bottom limiter level	0													
	3	RGBL	RGB limmiter level	2													
	4	YLMT	Y limiter level	2													
	5	AGNG	Black/White aging	0													
	6	AKBO	AKB on/off	0													
	7	CLPP	Clamp pulse phase	3													
	8	CLPG	Clamp gate on/off	0													
	9	CLPS	Clamp pulse start timing shift	0													
	10	PPAD	Picture Position	3													
	11	SYNP		0													
	12	HVBT		0													

* DRC - any 480i signal
* HD / VDO - any non-480i signal

♣	Adjustable - M Board CBA
♦	Adjustable - B Board CBA
♠	Adjustable - On Line (STD LIST)

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION		DATA													
CXA2170P-3					RF		V5,V6				V7					MS	MS	
						V1-V4	480i	480P	1080i	720P	480i	480P	1080i	720P	VGA	Play	Menu	Twin
WV600 Data	0	SYSM	Selects the signal bandwidth [0:NTSC, 1:FF, 2:HD, 3:DTV]	Vivid	1	1	1	1	3	3	1	1	3	3	1	3	3	2
				Standard	1	1	1	1	3	3	1	1	3	3		3	3	2
				Movie	1	1	1	1	3	3	1	1	3	3		3	3	2
				Pro	1	2	1	1	3	3	1	1	3	3		3	3	2
	1	VMLV	VM output level	7														
	2	VMCR	VM output coring level	Vivid	1	1	1	1	0	0	1	1	0	0	0	0	3	1
				Standard	1	1	1	1	0	0	1	1	0	0		0	3	1
				Movie	1	1	1	1	0	0	1	1	0	0		0	3	1
				Pro	1	1	1	1	0	0	1	1	0	0		0	3	1
	3	VMLM	VM limiter level	Vivid	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Standard	0	0	0	0	0	0	0	0	0	0		0	0	0
				Movie	0	0	0	0	0	0	0	0	0	0		0	0	0
				Pro	0	0	0	0	0	0	0	0	0	0		0	0	0
	4	VMF0	VM output center frequency	Vivid	0 ♥ 2 ♥	0 ♥ 2 ♥	1 ♥ 2 ♥	1 ♥ 2 ♥	2	2	1 ♥ 2 ♥	1 ♥ 2 ♥	2	2	2	2	2	0 ♥ 2 ♥
				Standard	0 ♥ 2 ♥	0 ♥ 2 ♥	1 ♥ 2 ♥	1 ♥ 2 ♥	2	2	1 ♥ 2 ♥	1 ♥ 2 ♥	2	2		2	2	0 ♥ 2 ♥
				Movie	2	2	2	2	2	2	2	2	2	2		2	2	2
				Pro	2	0	2	2	2	2	2	2	2	2		2	2	2
	5	VMDL	VM output phase	Vivid	15 ♥ 8 ♥	15 ♥ 8 ♥	11 ♥ 8 ♥	11 ♥ 8 ♥	10	10	11 ♥ 8 ♥	11 ♥ 8 ♥	10	10	8	10	10	15 ♥ 8 ♥
				Standard	15 ♥ 8 ♥	15 ♥ 8 ♥	11 ♥ 8 ♥	11 ♥ 8 ♥	10	10	11 ♥ 8 ♥	11 ♥ 8 ♥	10	10		10	10	15 ♥ 8 ♥
				Movie	8	8	8	8	10	10	8	8	10	10		10	10	8
				Pro	8	15	8	8	10	10	8	8	10	10		10	10	8
	6	SHOF	Sharpness gain	Vivid	0 ● 2 ♥	1	2 ● 1 ♥	0	2 ● 3 ● 2 ♥	2 ● 3 ● 2 ♥	2 ● 1 ♥	0	2 ● 3 ● 2 ♥	2 ● 3 ● 2 ♥	0	2 ● 3 ● 2 ♥	0	0
				Standard	0 ♥ 2 ♥	1 ♥ 2 ♥	1 ♥ 2 ♥	1 ♥ 0 ♥	2	2	1 ♥ 2 ♥	1 ♥ 0 ♥	2	2		2	0	0
				Movie	1	1	1	1	1	1	1	1	1	1		1	0	1
				Pro	0	0	0	0	0	0	0	0	0	0		0	0	0
	7	SHF0	Sharpness center frequency	Vivid	1	1	1	1	1	1	1	1	1	1	1	1	1	1
				Standard	1	1	1	1	1	1	1	1	1	1		1	1	1
				Movie	1	1	1	1	1	1	1	1	1	1		1	1	1
				Pro	1	1	1	1	1	1	1	1	1	1		1	1	1
	8	PROV	Pre-shoot / Over-shoot ratio	Vivid	3	3	3	3	3	3	3	3	3	3	3	3	3	2
				Standard	3	3	3	3	3	3	3	3	3	3		3	3	2
				Movie	3	3	3	3	3	3	3	3	3	3		3	3	2
				Pro	3	3	3	3	3	3	3	3	3	3		3	3	2

♥	WV600 and WV700 are different
●	65WV600 and 57WV600 different

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION		RF	V1-V4	V5,V6 480i	V5,V6 480P	V5,V6 1080i	V5,V6 720P	V7 480i	V7 480P	V7 1080i	V7 720P	VGA	MS Play	MS Menu	Twin
CXA2170P-3	9	F1LV	Sharpness f1	Vivid	0	0	0	0	3	3	0	0	3	3		3	0	0
				Standard	0	0	0	0	3	3	0	0	3	3	0	3	0	0
				Movie	0	0	0	0	3	3	0	0	3	3		3	0	0
				Pro	0	0	0	0	3	3	0	0	3	3		3	0	0
	10	LTLV	LTI level	Vivid	3	3	3	3	3	3	3	3	3	3		3	3	3
				Standard	2	2	3	3	3	3	3	3	3	3	0	3	3	3
				Movie	1	1	1	1	1	1	1	1	1	1		1	1	1
				Pro	0	0	0	0	0	0	0	0	0	0		0	0	0
	11	LTMD	LTI mode [0:for B&W, 1:for Black]	Vivid	1	1	1	1	1	1	1	1	1	1		1	1	0
				Standard	1	1	1	1	1	1	1	1	1	1	0	1	1	0
				Movie	0	0	0	0	0	0	0	0	0	0		0	0	0
				Pro	1	1	1	1	1	1	1	1	1	1		1	1	0
	12	CTLV	CTI level [0:Off, 1:Low, 2:Mid, 3:High]	Vivid	0	0	0	0	0	0	0	0	0	0		0	0	0
				Standard	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Movie	0	0	0	0	0	0	0	0	0	0		0	0	0
				Pro	0	0	0	0	0	0	0	0	0	0		0	0	0
	13	UBOF	User brightness offset BRIGHT=BRIGHT+UBOF*2	Vivid	4	2 ♥ 3 ♥	4 ♥ 3 ♥	4	2	2	4 ♥ 3 ♥	4	2	2	3	2	2	4 ♥ 0 ♥
				Standard	1 ♥ 5 ♥	1 ♥ 0 ♥	2	3	4	4	2	3	4	4		4	4	7
				Movie	0	0	3	3	3	3	3	3	3	3		3	3	2
				Pro	0	0	3	3	3	3	3	3	3	3		3	3	4
	14	UCOF	User color offset COLOR=COLOR+UCOF*2	Vivid	3 ♥ 0 ♥	3 ♥ 1 ♥	3 ♥ 1 ♥	1	1 ● 2 ● 3 ♥	1 ● 2 ● 3 ♥	3 ♥ 1 ♥	1	1 ● 2 ● 3 ♥	1 ● 2 ● 3 ♥		1 ● 2 ● 3	1 ● 2 ● 3	1 ● 2 ● 0 ♥
				Standard	1 ♥ 0 ♥	2 ♥ 0 ♥	1	1 ♥ 0 ♥	0 ♥ 1 ♥	0 ♥ 1 ♥	1	1	0 ♥ 1 ♥	0 ♥ 1 ♥	0	0 ♥ 1 ♥	0 ♥ 1 ♥	0
				Movie	0	0	0	0	0	0	0	0	0	0		0	0	0
				Pro	0	0	0	0	0	0	0	0	0	0		0	0	0
	15	UHOF	User hue offset [0:HUE+0, 1:HUE+1 ,2:HUE+2, 3:HUE+3]	Vivid	2	0 ♥ 3 ♥	1 ♥ 3 ♥	0 ♥ 2 ♥	1 ♥ 2 ♥	1 ♥ 2 ♥	1 ♥ 3 ♥	0 ♥ 2 ♥	1 ♥ 2 ♥	1 ♥ 2 ♥		1 ♥ 2 ♥	1 ♥ 2 ♥	2
				Standard	1 ♥ 2 ♥	0 ♥ 3 ♥	1 ♥ 3 ♥	0 ♥ 2 ♥	1 ♥ 2 ♥	1 ♥ 2 ♥	1 ♥ 3 ♥	0 ♥ 2 ♥	1 ♥ 2 ♥	1 ♥ 2 ♥	0	1 ♥ 2 ♥	1 ♥ 2 ♥	0
				Movie	0	0	0	0	0	0	0	0	0	0		0	0	0
				Pro	0	0	0	0	0	0	0	0	0	0		0	0	0
	16	MIDE	MID Enhancement setting table	Vivid	7	12	17	22	27	32	17	22	27	32		27	27	57
				Standard	5	11	16	21	26	31	16	21	26	31		26	26	56
				Movie	3	10	15	24	25	30	15	24	25	30	1	25	25	55
				Pro	0	8	13	18	23	28	13	18	23	28		23	23	53

17	VM	Initial VM [0:off, 1:Low, 2:Mid, 3:High]	Vivid	3	Standard	3	Movie	2	Pro	0			
18	VM_H	VM high level assignment	Vivid	15	Standard	15	Movie	12	Pro	15			
19	VM_M	VM mid level assignment	Vivid	10	Standard	10	Movie	8	Pro	10			
20	VM_L	VM low level assignment	Vivid	5	Standard	5	Movie	4	Pro	5			
21	VGAP		5										
22	VGAS		0										
23	VGAB		0										
24	VGAC		0										
25	VGAV		5										

♥	WV600 and WV700 are different
●	65WV600 and 57WV600 different

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	DATA
CXA2170P-4	0	YCON	Y signal gain	MS 0 Others 1
	1	SPIC	Sub picture	RF, V1-4, 480i(V5, V6) 14 HD* (V5,V6) 15 HD (V7) 15 MS 0
	2	SCOL	Sub color adjustment	RF, V1-4, 480i(V5, V6) ♦ 34 HD* (V5,V6) ♦ 36 HD (V7) ♦ 34 MS ♦ 31
	3	SHUE	Sub HUE adjustment	RF, V1-4, 480i(V5, V6) ♦ 30 HD* (V5,V6) ♦ 30 HD (V7) ♦ 30 MS ♦ 30
	4	SPIO	Sub picture offset	7 ♠
	5	SCLO	Sub color offset	7 ♠
	6	SHUO	Sub HUE offset	7 ♠

*HD = 480P, 720P, 1080i

				WV700	WV600		WV700	WV600		WV700	WV600			
7	UPIC	User Picture gain	Vivid	63		Standard	50	47	Movie	20	18	Pro	31	
8	UBRT	User Brightness	Vivid	28	19	Standard	36	31	Movie	34	31	Pro	31	
9	UCOL	User Color	Vivid	33		Standard	31		Movie	33		Pro	31	
10	UHUE	User Hue	Vivid	31		Standard	31		Movie	31		Pro	31	
11	USHP	User Sharpness	Vivid	29	25	Standard	29		Movie	23		Pro	31	
12	UTMP	User Color Temp [0:Low, 1:Mid, 2:High, 3:Inhibit]	Vivid	2		Standard	1		Movie	0		Pro	1	
13	R-YR	R-Y/R	8											
14	R-YB	R-Y/B	15											

				RF	V5,V6				V7					MS	MS	
15	G-YR	G-Y/R	9													
16	G-YB	G-Y/B	6													
17	GAMM	Initial Gamma [0:Weak, 3:Strong]		V1-V4	480i	480P	1080i	720P	480i	480P	1080i	720P	VGA	Play	Menu	Twin
			Vivid	3	3	3	3	3	3	3	3	3		3	3	3
			Standard	2	2	2	2	2	2	2	2	2		2	2	2
			Movie	1	1	1	1	1	1	1	1	1		1	1	1
			Pro	0	0	0	0	0	0	0	0	0	0	0	0	0

				WV700	WV600		WV700	WV600		WV700	WV600			
18	GAMS	GAM shape	GAMM = 0	0	GAMM =1	7		GAMM =2	7		GAMM =3	7		
19	GAMR	R output gamma	GAMM = 0	0	GAMM =1	6	4	GAMM =2	4	3	GAMM =3	9	7	
20	GAMG	G output gamma	GAMM = 0	0	GAMM =1	6	4	GAMM =2	4	3	GAMM =3	9	7	
21	GAMB	B output gamma	GAMM = 0	0	GAMM =1	6	4	GAMM =2	4	3	GAMM =3	9	7	

				RF	V5,V6				V7					MS	MS	
22	BLK	Initial black level		V1-V4	480i	480P	1080i	720P	480i	480P	1080i	720P	VGA	Play	Menu	Twin
			Vivid	3	3	3	3 ♥	3 ♥	3	3	3 ♥	3 ♥		3 ♥	3 ♥	1
							2 ♥	2 ♥			2 ♥	2 ♥		2 ♥	2 ♥	
			Standard	2	1	1	1	1	1	1	1	1		1	1	1
			Movie	0	0	0	0	0	0	0	0	0		0	0	0
			Pro	0	0	0	0	0	0	0	0	0	0	0	0	0

				WV700	WV600			WV700	WV600			
23	DCTR	DC tran ratio	BLK = 0	0	BLK = 1 ♥	5	10	BLK = 2	8	BLK = 3 ♥	8	15
24	APED	Auto pedestal level	BLK = 0	0	BLK = 1 ♥	1	2	BLK = 2	1	BLK = 3	3	
25	DSBO	Sub bright offset for UBLK [0:-7step, 15:+8st]	BLK = 0	7	BLK = 1	7		BLK = 2	7	BLK = 3	7	
26	IDSW	ID Switch	0									
27	ABLM	ABL mode	BLK = 0	0	BLK = 1	0	BLK = 2	1	BLK = 3	1		
28	ABLT	ABL threshold voltage	Single Picture	8	Others	8						
29	SPOF	Picture offset for Twin, Freeze, & Norm.	0									
30	DPSQ	Auto Pedestal black size inflection setting	BLK = 0	0	BLK = 1	0	BLK = 2	0	BLK = 3	0		
31	LRGB	Picture gain control for LRGB (OSD RGB)	0									

♣	Adjustable - M Board CBA
♦	Adjustable - B Board CBA
♠	Adjustable - On Line (STD LIST)
♥	WV600 and WV700 are different

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	480P/960i				540P/1080i
				WideZoom	Zoom	Full (Fav,Scroll)	Normal	Full (Twin, MS)
CXA2170D-1	0	VPOS	Vertical Position	25 ♠				
	1	VSIZ	Vertical Size	31 ♠				
	2	VSZO	V Size offset (PJ only)	0				≈0
	3	VLIN	Vertical Linearity	5	5			
	4	VSCO	Vertical S-Correction	10	8			
	5	VCEN	Vertical Center	31				
	6	VPIN	Vertical Pin	15*			15	15*
	7	MVPN	Vertical Middle Pin	0				
	8	NSCO	Rotation	31				
	9	HTPZ	Horizontal Trapezoid	15				
	10	MHTZ	Middle Horizontal Trapezoid	0				
	11	ZOOM	Zoom Switch	1	1	0		
	12	APSW	Aspect Switch	1	1	1	1	0
	13	ASPT	Aspect Ratio	24	49	5	5	3
	14	SCRL	Vertical Scroll	29	29	29	29	29
	15	UVLN	Upper Vertical Linearity	4	0			
	16	LVLN	Lower Vertical Linearity	4	0			
CXA2170D-2	0	HCNT	Shading DC	19				
	1	HPOS	Horizontal Position	23				23
	2	HSIZ	Horizontal Size	31 ♠	31 ♠			
	3	SLIN	Blue Offset DC	9 ♠	9 ♠			
	4	MPIN	Blue Offset Para-Amp	0	0			
	5	PIN	Horizontal Pin	10	10			
	6	PINO	Pin Off-Set (PJ only)	7	7	7	7	7
	7	UCP	Upper Corner Pin	31	31			
	8	LCP	Lower Corner Pin	31	31			
	9	UXCG	Upper Extra Corner Pin Gain	0				
	10	LXCG	Lower Extra Corner Pin Gain	0				
	11	UXCP	Upper Extra Corner Pin Position	2				
	12	LXCP	Lower Extra Corner Pin Position	2				
	13	XCPP	Extra Corner Pin Polarity	0				
	14	PPHA	Pin Phase	31	31			
	15	VANG	AFC Angle	31				
	16	LANG	Shading Phase	31				
	17	VBOW	AFC Bow	31				
	18	LBOW	Shading Para Amp	48				

♣	Adjustable - M Board CBA
♦	Adjustable - B Board CBA
♠	Adjustable - On Line (STD LIST)

* This data resides in the same location in NVM.

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	480P/960i WideZoom	480P/960i Zoom	480P/960i Full (Fav,Scroll)	480P/960i Normal	540P/1080i Full (Twin, MS)
CXA2170D-3	0	HBLK	Horizontal Blanking Switch	1				
	1	LBLK	Left Blanking	56				56
	2	RBLK	Right Blanking	25				25
	3	VBLK	Vertical Blanking Switch	0	0	1*	1	1*
	4	TBLK	Top Blanking	7	7	4	4	4
	5	BBLK	Bottom Blanking	7	7	8	8	6
	6	AFCM	AFC Loop Gain	3				3
	7	JUMP	Reference Pulse Jump Switch	0*			0	0*
	8	VDJP	Vertical Drive Jump Switch	1	1	1		1
	9	VDST	Vertical Drive Start Switch	0				0
	10	AKBT	AKB Timing	9	9	9		9
CXA2170D-4	0	QPAM	DQP amplitude LEVEL	17			17	17*
	1	QPAV	DQP amplitude VERTICAL MODULATION	31			31	31*
	2	QPAP	DQP amplitude TILT	7			7	7*
	3	QPDC	DQP DC level	20			20	20*
	4	QPDV	DQP DC level VERTICAL MODULATION	60			60	60
	5	QPDP	DQP DC level TILT	7			7	7*
	6	CPY1	COPY FUNCTION (Full to Vcomp/normal)	0				
	7	DF	DF phase	31				
	8	DQP	DQP phase	31				
	9	DHMT	DH Board Mute	0				
CXA2170D-5	0	VFRQ	Vertical Frequency	1				
	1	VON	Vertical Drive On Switch	1				
	2	EWDC	Pin DC Level Shift	0				
	3	MS15	FH=15K @ MS Mode	0				
	4	HFRQ	Fh setting @multi-scan	80				
	5	HFRX	Reciprocal Fh @mult-scan	25				
	6	VMPS	Vertical Mult-scan Mode	0				
	7	INTR	Free-run Interlace Setting	0				
	8	VLNL	Vertical # of Lines (L)	0				
	9	VLNH	Vertical # of Lines (H)	0				
	10	AGCS	Vertical AGC Mode	0				

* This data resides in the same location in NVM.

CATEGORY	#	ITEM	DESCRIPTION								
CXA2171	0	MTRX	Matrix	FRGB = 1	3	V5,V6,V7, no sync	1	Others	0		
	1	GAIN	Output gain for Video	0							
	2	FIXS	SYNC type	V5/V6 (480p, 720p, 1080i, No Sync)	0	V7 (480p, VGA, 720p, 1080i, No Sync)	0	Others	0		
	3	CBGN	Output gain for Cb	5 ♣							
	4	CRGN	Output gain for Cr	5 ♣							
	5	YGN	Output gain for Y	5 ♣							
	6	VTC	V SYNC sep. time constant	0							
	7	HTC	H SYNC sep. time constant	Tri-level sync	0	Others	1				
	8	HWID	H SYNC width	1							
	9	HSEP	SYNC sep. type	1							
	10	HMSK	H SYNC MASK during V SYNC period	1080i	0	Others	1				
	11	FRGB	Matrix=3:RGB	V5/V6 (480p, 720p, 1080i, No Sync)	0	V7 (480p, VGA, 720p, 1080i, No Sync)	0	Others	0		

♣	Adjustable - M Board CBA
♦	Adjustable - B Board CBA
♠	Adjustable - On Line (STD LIST)

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	DATA
MID-1	0	DHPH	h active display area phase	H-resolution = 1920: 106
	1	DVPH	v active display area phase	H-resolution = 1920: 20
Common	2	DHAR	h active display area size	H-resolution = 1920: 240
picture	3	DVAR	v active display area size	H-resolution = 1920: 135
data	4	DHPW	display h pulse width	H-resolution = 1920: 55
	5	DVPW	display v pulse width	H-resolution = 1920: 5
	6	DYCD	display output yc signal delay correct	MID Mode = Single: Analog 480i 0, Analog Others 0 MID Mode = Twin: 2 MID Mode = Memo: 2 MID Mode = Favorite: 2 MID Mode = Scroll / Index: 2
NOTE:	7	DYSD	display output ys signal delay correct	Table 0 7, Table 1 4, Table 2 2, Table 3 1, Table = (2170P-3 SYSM) + (2170P-3 SHFO) - 1
All data listed	8	MDHP	main display picture h position	H-resolution = 1920: Widemode = Normal 160, Widemode = Others 0
data unless	9	MDVP	main display picture v position	Input = 480i / 480P / VGA: Widemode = Others 30 Input = Others: 0
INITIALIZE:	10	MDHS	main display picture h size	H-resolution = 1920: Widemode = Normal 163, Widemode = Others 240
Display twin	11	MDVS	main display picture v size	Input = 480i: 120, Widemode = Others 120 Input = Others: 135
mode with one	12	MLHP	multi picture mode h position	MID Mode = Twin / Memo: 43, MID Mode = Favorite: 35, MID Mode = Scroll / Index: 40
the other.	13	MLVP	multi picture mode v position	MID Mode = Twin / Memo: 9, MID Mode = Favorite: 30, MID Mode = Scroll / Index: 29
Enter service.	14	SDHP	sub display picture h position	MID Mode = Favorite: 167
"7" + "JUMP"	15	SDVP	sub display picture v position	MID Mode = Favorite: 6
+ "ENTER"	16	SDHS	sub display picture h size	MID Mode = Favorite: 115
Wait until pics	17	SDVS	sub display picture v size	MID Mode = Favorite: 75
become same	18	PDHP	PinP Large mode h position	0
size. WRITE.	19	PDVP	PinP Large mode v position	0
	20	PDHS	PinP Large mode h size	0
	21	PDVS	PinP Large mode v size	0
	22	DPSW	display pll switch	MID Mode = Single, Input = 1080i 0, Others 0
	23	MDLO	model select	12 — MDLO Details ↓ / 0 ↓ / 1 ↓
				Bit7: Not Used
				Bit6: Not Used
				Bit5: Scroll Sub-Picture (16:9 only) / 4:3 Display / 16:9 Display
				Bit4: Memory-PLL Freguency / 18.54…MHz / 17.26…MHz
				Bit3: ADC-PLL Select / Internal / External
				Bit2: Frame On/Off (Twin) / Off / On
				Bit1: Display Type (Scroll) / 16:9 Model / 4:3 Model
				Bit0: Display Type (Twin, Memo) / 16:9 Model / 4:3 Model
	24	BCOL	Background color y [0 = Black, 15 = White]	MID Mode = Single: Widemode = Normal 5, Widemode = Others 5 MID Mode = MS: 5 MID Mode = Others: 5
	25	DYSS	display output ys signal type select	MID Mode = MS: 3
	26	OSDH	Index Sub-Picture OSD H position	MID Mode = Scroll / Index: 32
	27	OSDV	Index Sub-Picture OSD V position	MID Mode = Scroll / Index: 16

SERVICE DATA LISTS

MID MODE SINGLE PICTURE	SERVICE DATA				
RF, V1-4 Full (Other) MID2	MID2	0	DRHP	H Pos	117
	MID2	1	DRHS	H Size	178
	MID2	2	DRVP	V Pos	36
	MID2	3	DRVS	V Size	120
RF, V1-4 Normal MID2	MID2	0	DRHP	H Pos	154
	MID2	1	DRHS	H Size	162
	MID2	2	DRVP	V Pos	37
	MID2	3	DRVS	V Size	120
480i, V5-7 Full (Other) MID2	MID2	0	DRHP	H Pos	118
	MID2	1	DRHS	H Size	177
	MID2	2	DRVP	V Pos	37
	MID2	3	DRVS	V Size	120
480i, V5-7 Normal MID2	MID2	0	DRHP	H Pos	154
	MID2	1	DRHS	H Size	161
	MID2	2	DRVP	V Pos	33
	MID2	3	DRVS	V Size	122
480P Full (Other) MID3	MID3	0	VDHP	H Pos	147
	MID3	1	VDHS	H Size	240
	MID3	2	VDVE	V Pos	37
	MID3	3	VDVS	V Size	120
480P Normal MID3	MID3	0	VDHP	H Pos	201
	MID3	1	VDHS	H Size	216
	MID3	2	VDVE	V Pos	44
	MID3	3	VDVS	V Size	116
720P MID3	MID3	0	VDHP	H Pos	139
	MID3	1	VDHS	H Size	158
	MID3	2	VDVE	V Pos	25
	MID3	3	VDVS	V Size	179

MID MODE SINGLE PICTURE	SERVICE DATA				
1080i MID3	MID3	0	VDHP	H Pos	100
	MID3	1	VDHS	H Size	240
	MID3	2	VDVE	V Pos	18
	MID3	3	VDVS	V Size	135
VGA Full (Other) MID3	MID3	0	VDHP	H Pos	167
	MID3	1	VDHS	H Size	228
	MID3	2	VDVE	V Pos	36
	MID3	3	VDVS	V Size	119
VGA Normal MID3	MID3	0	VDHP	H Pos	213
	MID3	1	VDHS	H Size	207
	MID3	2	VDVE	V Pos	38
	MID3	3	VDVS	V Size	118

SERVICE DATA LISTS

MID MODE TWIN PICTURE		SERVICE DATA				
RF, V1-4	RF, V1-4	MID2	0	DRHP	H Pos	145
		MID2	1	DRHS	H Size	165
		MID2	2	DRVP	V Pos	58
		MID2	3	DRVS	V Size	110
MID2	MID3					
		MID3	0	VDHP	H Pos	74
		MID3	1	VDHS	H Size	165
		MID3	2	VDVE	V Pos	25
		MID3	3	VDVS	V Size	56
480i (V5-7)		MID2	0	DRHP	H Pos	144
		MID2	1	DRHS	H Size	164
		MID2	2	DRVP	V Pos	44
		MID2	3	DRVS	V Size	117
MID2						
480P	RF, V1-4	MID2	0	DRHP	H Pos	153
		MID2	1	DRHS	H Size	165
		MID2	2	DRVP	V Pos	58
		MID2	3	DRVS	V Size	110
MID3	MID2					
		MID3	0	VDHP	H Pos	188
		MID3	1	VDHS	H Size	220
		MID3	2	VDVE	V Pos	60
		MID3	3	VDVS	V Size	108
720P		MID3	0	VDHP	H Pos	160
		MID3	1	VDHS	H Size	148
		MID3	2	VDVE	V Pos	55
		MID3	3	VDVS	V Size	165
MID3						
		MID3	0	VDHP	H Pos	141
1080i		MID3	1	VDHS	H Size	221
		MID3	2	VDVE	V Pos	41
MID3		MID3	3	VDVS	V Size	124
VGA		MID3	0	VDHP	H Pos	198
		MID3	1	VDHS	H Size	213
		MID3	2	VDVE	V Pos	54
		MID3	3	VDVS	V Size	111
MID3						

MID MODE FREEZE		SERVICE DATA				
RF, V1-4	FREEZE	MID2	0	DRHP	H Pos	146
		MID2	1	DRHS	H Size	164
		MID2	2	DRVP	V Pos	58
		MID2	3	DRVS	V Size	110
MID2						
480i (V5-7)	FREEZE	MID2	0	DRHP	H Pos	145
		MID2	1	DRHS	H Size	163
		MID2	2	DRVP	V Pos	44
		MID2	3	DRVS	V Size	117
MID2						
480P	FREEZE	MID3	0	VDHP	H Pos	188
		MID3	1	VDHS	H Size	219
		MID3	2	VDVE	V Pos	62
		MID3	3	VDVS	V Size	107
MID3						
720P	FREEZE	MID3	0	VDHP	H Pos	161
		MID3	1	VDHS	H Size	147
		MID3	2	VDVE	V Pos	54
		MID3	3	VDVS	V Size	165
MID3						
		MID3	0	VDHP	H Pos	142
1080i	FREEZE	MID3	1	VDHS	H Size	220
		MID3	2	VDVE	V Pos	43
MID3		MID3	3	VDVS	V Size	123
VGA	FREEZE	MID3	0	VDHP	H Pos	204
		MID3	1	VDHS	H Size	210
		MID3	2	VDVE	V Pos	60
		MID3	3	VDVS	V Size	108
MID3						

SERVICE DATA LISTS

MID MODE	FAVORITE CHANNEL	SERVICE DATA				
RF, V1-4 / MID2	FAV / MID3	MID2	0	DRHP	H Pos	146
		MID2	1	DRHS	H Size	165
		MID2	2	DRVP	V Pos	37
		MID2	3	DRVS	V Size	120
		MID3	0	VDHP	H Pos	76
		MID3	1	VDHS	H Size	169
		MID3	2	VDVE	V Pos	20
		MID3	3	VDVS	V Size	57
480i (V5-7) / MID2	FAV / MID3	MID2	0	DRHP	H Pos	145
		MID2	1	DRHS	H Size	163
		MID2	2	DRVP	V Pos	22
		MID2	3	DRVS	V Size	128
		MID3	0	VDHP	H Pos	76
		MID3	1	VDHS	H Size	172
		MID3	2	VDVE	V Pos	20
		MID3	3	VDVS	V Size	57
480P / MID3	FAV / MID2	MID2	0	DRHP	H Pos	154
		MID2	1	DRHS	H Size	172
		MID2	2	DRVP	V Pos	39
		MID2	3	DRVS	V Size	115
		MID3	0	VDHP	H Pos	187
		MID3	1	VDHS	H Size	219
		MID3	2	VDVE	V Pos	37
		MID3	3	VDVS	V Size	120
720P / MID3	FAV	MID3	0	VDHP	H Pos	157
		MID3	1	VDHS	H Size	148
		MID3	2	VDVE	V Pos	60
		MID3	3	VDVS	V Size	162
1080i / MID3	FAV	MID3	0	VDHP	H Pos	134
		MID3	1	VDHS	H Size	222
		MID3	2	VDVE	V Pos	45
		MID3	3	VDVS	V Size	122
VGA / MID3	FAV	MID3	0	VDHP	H Pos	200
		MID3	1	VDHS	H Size	211
		MID3	2	VDVE	V Pos	39
		MID3	3	VDVS	V Size	118

MID MODE	CHANNEL INDEX	SERVICE DATA				
RF, V1-4 / MID2	INDEX / MID3	MID2	0	DRHP	H Pos	146
		MID2	1	DRHS	H Size	164
		MID2	2	DRVP	V Pos	36
		MID2	3	DRVS	V Size	120
		MID3	0	VDHP	H Pos	71
		MID3	1	VDHS	H Size	167
		MID3	2	VDVE	V Pos	24
		MID3	3	VDVS	V Size	57
480i (V5-7) / MID2	INDEX	MID2	0	DRHP	H Pos	145
		MID2	1	DRHS	H Size	163
		MID2	2	DRVP	V Pos	21
		MID2	3	DRVS	V Size	128
480P / MID3	INDEX / MID2	MID2	0	DRHP	H Pos	144
		MID2	1	DRHS	H Size	167
		MID2	2	DRVP	V Pos	50
		MID2	3	DRVS	V Size	114
		MID3	0	VDHP	H Pos	185
		MID3	1	VDHS	H Size	220
		MID3	2	VDVE	V Pos	44
		MID3	3	VDVS	V Size	116
720P / MID3	INDEX	MID3	0	VDHP	H Pos	160
		MID3	1	VDHS	H Size	147
		MID3	2	VDVE	V Pos	61
		MID3	3	VDVS	V Size	162
1080i / MID3	INDEX	MID3	0	VDHP	H Pos	138
		MID3	1	VDHS	H Size	221
		MID3	2	VDVE	V Pos	45
		MID3	3	VDVS	V Size	122
VGA / MID3	INDEX	MID3	0	VDHP	H Pos	200
		MID3	1	VDHS	H Size	211
		MID3	2	VDVE	V Pos	38
		MID3	3	VDVS	V Size	118

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	Register	Approx NVM addr	MID Mode	DATA											
MID-3																		
	4	VDVO	VDO input V active area line size	vdo_vactv_odd	A8 00 80	1080i	0	720p	0	480p	0	VGA	0					
	5	VCPO	VDO input V active area odd position			1080i	72	720p	88	480p	122	VGA	122					
VDO input	6	VCWD	VDO input clamp pulse output timing			1080i	3	720p	3	480p	3	VGA	3					
data	7	VYCD	VDO input clamp pulse width			1080i	0	720p	0	480p	0	VGA	0					
	8	VSTP	VDO input PLL phase detect stop line count			1080i	137	720p	183	480p	129	VGA	129					
	9	VSTT	VDO input PLL phase detect start line cnt			1080i	0	720p	0	480p	0	VGA	0					
	10	VHSC	VDO input H sync cycle			YC, all 480 inputs	130											
	11	VFRV	vdo_fld_rev			YC	0	480i	0	1080i	0	720p	0	480p	0	VGA	0	

CATEGORY	#	ITEM	DESCRIPTION			DATA ♥ WV600 and WV700 are different												
MID-5						POP Table Select (Based on 2170:MIDE setting)												
						0	1	2	3	4	5	6	7	8	9	10	11	12
	1	MHLY	m_hlpf_ycoef		WV600 ♥	1	2	1	2	1	1	1	1	1	3	1	1	1
					WV700 ♥	2					2		2					
	2	MHLC	m_hlpf_ccoef			3	0	3	3	3	3	3	3	3	3	3	3	3
	3	MVLY	m_vlpf_ycoef			0	0	0	0	0	0	0	0	0	1	0	0	0
	4	MVLC	m_vlpf_ccoef			0	0	0	0	0	0	0	0	0	1	0	0	0
	5	MHYR	m_henh_ycore		WV600 ♥	0	0	1	0	2	3	3	3	0	0	0	1	1
					WV700 ♥												2	2
	6	MHYL	m_henh_yclip		WV600 ♥	0	0	1	0	1	1	2	1	0	0	0	1	1
					WV700 ♥						2		2				2	2
TO	7	MHYE	m_henh_yenh		WV600 ♥	0	0	5	0	6	0	7	0	0	0	0	7	7
INITIALIZE:					WV700 ♥						7		7				4	
	8	MHYO	m_henh_ycof			1	0	1	1	1	1	1	1	1	0	1	1	1
Display twin	9	MHCR	m_henh_ccore			0	0	0	0	0	0	0	0	0	0	0	0	0
mode with one	10	MHCL	m_henh_cclip			0	0	0	0	0	0	0	0	0	0	0	0	0
	11	MHCE	m_henh_cenh			0	0	0	0	0	0	0	0	0	0	0	0	0
side larger than	12	MHCO	m_henh_ccof			1	0	0	1	0	0	0	0	0	0	0	0	0
the other.	13	MVYR	m_venh_ycore		WV600 ♥	0	0	0	0	1	2	2	3	0	0	0	1	1
Enter service.					WV700 ♥								2				2	3
"7" + "JUMP"	14	MVYL	m_venh_yclip			0	0	0	0	1	1	1	1	0	0	0	1	1
+ "ENTER"	15	MVYE	m_venh_yenh		WV600 ♥	0	0	0	0	1	5	3	5	0	0	0	5	5
Wait until pics					WV700 ♥						3		3				3	3
become same	16	MVCR	m_venh_ccore			0	0	0	0	0	0	0	0	0	0	0	0	0
size. WRITE.	17	MVCL	m_venh_cclip			0	0	0	0	0	0	0	0	0	0	0	0	0
	18	MVCE	m_venh_cenh			0	0	0	0	0	0	0	0	0	0	0	0	0

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION			DATA ♥ WV600 and WV700 are different												
MID-5						POP Table Select (Based on 2170:MIDE setting)												
						13	14	15	16	17	18	19	20	21	22	23	24	25
	1	MHLY	m_hlpf_ycoef			2	3	2	2	2	1	3	1	1	1	0	1	0
	2	MHLC	m_hlpf_ccoef			3	3	3	3	3	3	3	3	3	3	2	3	2
	3	MVLY	m_vlpf_ycoef			0	1	0	0	0	0	1	0	0	0	0	0	0
TO	4	MVLC	m_vlpf_ccoef			0	1	0	0	0	0	1	0	0	0	0	0	0
INITIALIZE:	5	MHYR	m_henh_ycore		WV600 ♥	0	0	0	1	1	0	0	1	1	3	0	0	0
					WV700 ♥					3				2				
Display twin mode with one	6	MHYL	m_henh_yclip		WV600 ♥	0	0	0	2	1	0	0	1	1	1	0	0	0
					WV700 ♥									2				
side larger than	7	MHYE	m_henh_yenh		WV600 ♥	0	0	0	7	7	0	0	7	4	0	0	0	0
					WV700 ♥				2					0	4			
the other.						0	0	0	1	1	1	0	1	1	1	1	1	1
Enter service.	9	MHCR	m_henh_ccore			0	0	0	2	2	0	0	0	0	2	0	0	0
"7" + "JUMP"	10	MHCL	m_henh_cclip			0	0	0	0	0	0	0	0	0	0	0	0	0
+ "ENTER"	11	MHCE	m_henh_cenh			0	0	0	0	0	0	0	0	0	0	0	0	0
Wait until pics	12	MHCO	m_henh_ccof			0	0	0	1	1	1	0	0	1	1	1	1	1
become same	13	MVYR	m_venh_ycore		WV600 ♥	0	0	0	1	1	0	0	0	1	1	0	0	0
size. WRITE.					WV700 ♥									2	2			
	14	MVYL	m_venh_yclip			0	0	0	1	1	0	0	1	1	1	0	0	0
	15	MVYE	m_venh_yenh		WV600 ♥	0	0	0	5	7	0	0	3	5	7	0	0	0
					WV700 ♥				3	5				3	5			
	16	MVCR	m_venh_ccore	m_venh_ccore		0	0	0	2	2	0	0	0	0	2	0	0	0
	17	MVCL	m_venh_cclip	m_venh_cclip		0	0	0	0	0	0	0	0	0	0	0	0	0
	18	MVCE	m_venh_cenh	m_venh_cenh		0	0	0	0	0	0	0	0	0	0	0	0	0
						POP Table Select												
						26	27	28	29	30	31	32	33	34	35	36	37	38
	1	MHLY	m_hlpf_ycoef			0	0	0	3	0	0	0	1	3	1	1	1	1
	2	MHLC	m_hlpf_ccoef			2	2	0	3	0	0	0	3	3	3	3	3	3
	3	MVLY	m_vlpf_ycoef			0	0	0	1	0	0	0	0	1	0	0	0	0
	4	MVLC	m_vlpf_ccoef			0	0	0	1	0	0	0	0	1	0	0	0	0
NOTE:	5	MHYR	m_henh_ycore			2	2	0	0	0	1	3	0	0	1	1	1	1
All data listed	6	MHYL	m_henh_yclip			1	1	0	0	0	1	1	0	0	1	2	2	1
here is INITIAL	7	MHYE	m_henh_yenh			5	5	0	0	4	7	4	0	0	2	2	7	7
data unless	8	MHYO	m_henh_ycof			1	1	1	0	1	1	1	1	0	1	1	1	1
marked by *.	9	MHCR	m_henh_ccore			2	3	0	0	0	1	3	0	0	0	0	0	0
	10	MHCL	m_henh_cclip			2	2	0	0	0	2	2	0	0	0	0	0	0
	11	MHCE	m_henh_cenh			2	2	0	0	0	2	2	0	0	0	0	0	0
	12	MHCO	m_henh_ccof			1	1	1	0	1	1	1	0	0	0	0	0	0
	13	MVYR	m_venh_ycore			2	2	0	0	0	1	3	0	0	1	1	2	0
	14	MVYL	m_venh_yclip			1	1	0	0	0	1	1	0	0	1	1	1	0
	15	MVYE	m_venh_yenh			3	7	0	0	0	4	3	0	0	5	7	5	0
	16	MVCR	m_venh_ccore			2	3	0	0	0	1	3	0	0	0	0	0	0
	17	MVCL	m_venh_cclip			1	1	0	0	0	1	1	0	0	0	0	0	0
	18	MVCE	m_venh_cenh			2	3	0	0	0	4	3	0	0	0	0	0	0

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION			DATA												
MID-5						POP Table Select												
						39	40	41	42	43	44	45	46	47	48	49	50	51
NOTE:	1	MHLY	m_hlpf_ycoef			3	1	1	1	0	3	0	0	0	0	0	0	0
All data listed	2	MHLC	m_hlpf_ccoef			3	3	3	3	0	3	0	0	0	0	0	0	0
here is INITIAL	3	MVLY	m_vlpf_ycoef			1	0	0	0	0	1	0	0	0	0	0	0	0
data unless	4	MVLC	m_vlpf_ccoef			1	0	0	0	0	1	0	0	0	0	0	0	0
marked by *.	5	MHYR	m_henh_ycore			0	1	1	1	0	0	0	0	0	0	0	0	0
	6	MHYL	m_henh_yclip			0	1	2	2	1	0	1	1	1	1	1	1	1
TO	7	MHYE	m_henh_yenh			0	3	2	7	2	0	4	7	7	2	2	4	7
INITIALIZE:	8	MHYO	m_henh_ycof			0	1	1	1	0	0	0	0	0	0	0	0	0
Display twin	9	MHCR	m_henh_ccore			0	0	0	0	0	0	0	1	1	0	0	0	1
mode with one	10	MHCL	m_henh_cclip			0	0	0	0	0	0	0	1	1	0	0	0	1
side larger than	11	MHCE	m_henh_cenh			0	0	0	0	0	0	0	4	4	0	0	0	4
the other.	12	MHCO	m_henh_ccof			0	0	0	0	0	0	0	1	1	0	0	0	1
Enter service.	13	MVYR	m_venh_ycore			0	1	1	1	0	0	0	0	0	0	0	0	0
"7" + "JUMP"	14	MVYL	m_venh_yclip			0	1	1	1	0	0	1	1	1	0	0	1	1
+ "ENTER"	15	MVYE	m_venh_yenh			0	4	7	5	0	0	4	4	4	0	0	4	4
Wait until pics	16	MVCR	m_venh_ccore			0	0	0	0	0	0	0	1	1	0	0	0	1
become same	17	MVCL	m_venh_cclip			0	0	0	0	0	0	0	1	1	0	0	0	1
size. WRITE.	18	MVCE	m_venh_cenh			0	0	0	0	0	0	0	4	4	0	0	0	4

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION			DATA												
MID-5						POP Table Select												
						52	53	54	55	56	57	58	59	60	61	62	63	64
	1	MHLY	m_hlpf_ycoef			0	0	0	0	0	0	0	0	0	0	0	0	0
	2	MHLC	m_hlpf_ccoef			0	0	0	0	0	0	0	0	0	0	0	0	0
	3	MVLY	m_vlpf_ycoef			0	0	0	0	0	0	0	0	0	0	0	0	0
NOTE:	4	MVLC	m_vlpf_ccoef			0	0	0	0	0	0	0	0	0	0	0	0	0
All MID data	5	MHYR	m_henh_ycore			0	0	0	0	0	0	0	0	0	0	0	0	0
here is INITIAL	6	MHYL	m_henh_yclip			1	0	0	0	0	0	0	0	0	0	0	0	0
data unless	7	MHYE	m_henh_yenh			7	0	0	0	0	0	0	0	0	0	0	0	0
marked by *.	8	MHYO	m_henh_ycof			0	0	0	0	0	0	0	0	0	0	0	0	0
	9	MHCR	m_henh_ccore			1	0	0	0	0	0	0	0	0	0	0	0	0
	10	MHCL	m_henh_cclip			1	0	0	0	0	0	0	0	0	0	0	0	0
	11	MHCE	m_henh_cenh			4	0	0	0	0	0	0	0	0	0	0	0	0
	12	MHCO	m_henh_ccof			1	0	0	0	0	0	0	0	0	0	0	0	0
	13	MVYR	m_venh_ycore			0	0	0	0	0	0	0	0	0	0	0	0	0
	14	MVYL	m_venh_yclip			1	0	0	0	0	0	0	0	0	0	0	0	0
	15	MVYE	m_venh_yenh			4	0	0	0	0	0	0	0	0	0	0	0	0
	16	MVCR	m_venh_ccore			1	0	0	0	0	0	0	0	0	0	0	0	0
	17	MVCL	m_venh_cclip			1	0	0	0	0	0	0	0	0	0	0	0	0
	18	MVCE	m_venh_cenh			4	0	0	0	0	0	0	0	0	0	0	0	0
						MS												
	19	SHLY	s_hlpf_ycoef			0												
	20	SHLC	s_hlpf_ccoef			0												
	21	SVLY	s_vlpf_ycoef			0												
	22	SVLC	s_vlpf_ccoef			0												
	23	SHYR	s_henh_ycore			0												
	24	SHYL	s_henh_yclip			0												
	25	SHYE	s_henh_yenh			0												
	26	SHYO	s_henh_ycof			0												
	27	SHCR	s_henh_ccore			0												
	28	SHCL	s_henh_cclip			0												
	29	SHCE	s_henh_cenh			0												
	30	SHCO	s_henh_ccof			0												
	31	SVYR	s_venh_ycore			0												
	32	SVYL	s_venh_yclip			0												
	33	SVYE	s_venh_yenh			0												
	34	SVCR	s_venh_ccore			0												
	35	SVCL	s_venh_cclip			0												
	36	SVCE	s_venh_cenh			0												

CXA3506R				480i,YC	Others
	0	MCON	Main Contrast	64	64 ♦
	1	SCOR	Sub Contrast Red	128	128 ♦
	2	SCOG	Sub Contrast Green	128	128
	3	SCOB	Sub Contrast Blue	128	128 ♦
	4	RGB	RGB Out	0	0

♣	Adjustable - M Board CBA
♦	Adjustable - B Board CBA
♠	Adjustable - On Line (STD LIST)

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	DATA
AUDIO	0	ASYS	Stereo System 0:BiAmp, 1:3D	57": 0 65": 0
	1	TRCV	Fc= 0: 3KHz, 1: 5KHz, 2: 7KHz	57": 0 65": 0
	2	BACV	Fc= 0:80Hz, 1: 160Hz, 2: 240Hz	57": 1 65": 2
	3	MDCV	Fc= 0: 500Hz, 1: 1KHz, 2: 2KHz	57": 1 65": 1
	4	SVHI	Sub Vol Hi Freq (1db/step, 0:-7dB, 7:0dB)	57": 5 65": 5
	5	SVLO	Sub Volume Low Freq	57": 6 65": 6
	6	MIDL	Mid Cut Off	57": 9 65": 9
	7	LOFQ	Woofer Cut Off	57": 4 65": 4
	8	SBAS	Sub Bass	57": 9 65": 9
	9	BSFQ	Bass Cut Off	57": 7 65": 7
	10	STRE	Sub Treble	57": 4 65": 5
	11	TRFQ	Treble Cut Off	57": 7 65": 7
	12	PSEF	Pseudo Stereo Effect	57": 5 65": 5
	13	AGCL	AGC Level (0:500mV)	57": 0 65": 0

♥ WV600 and WV700 are different

				57" Surround OFF		57" Trusurround	57" Simulated	65" Surround OFF		65" Trusurround	65" Simulated
				Stdy Snd AUTO	Stdy Snd OFF	-	-	Stdy Snd AUTO	Stdy Snd OFF	-	-
	14	BBE	BBE Switch [1: On , 0: Off]	1	1	1	1	1	1	1	1
	15	BBEP	BBE1 High	2	2	3	2	2	2	3	2
	16	BBEL	BBE1 Low	1	1	1	1	2	2	3	2
	17	BB2P	BBE2 High	0	0	0	0	0	0	0	0
	18	BB2L	BBE2 Low	0	0	0	0	0	0	0	0
	19	TRS1	TruSurround Center	57": 4	65": 4						
	20	TRS2	TruSurround Space	57": 5	65": 5						

					SNNR=0	SNNR=1	SNNR=2	SNNR=3	SNNR=4	SNNR=5	SNNR=6	SNNR=7
SNNR	0	MODE	SNNR Mode (0: Auto: 1: SNNR, 2: OFF)	0								
	1	SNNR	Noise Reduction Level Setting	0								
	2	WSLT	WSL Noise Limit Threshold		0	15	31	45	63	85	127	180
RF	3	CPFG	3DCOMB:YPFG = YPFG – CPFG		0	0	1	0	1	1	2	2
Noise	4	CPFT	3DCOMB:YPFT = YPFT – CPFT		0	0	2	0	2	3	3	3
Reduction	5	CCOR	3DCOMB:YHCO = CCOR	WV600 ♥	0	2	2	2	2	3	3	3
				WV700 ♥		0	1	1	2	2		
	6	CHCG	3DCOMB:YHCG = CHCG		0	1	1	1	1	1	1	1
	7	CAPG	3DCOMG:VAPG = YAPG – CAPG		0	0	0	0	0	0	0	0
	8	3SHP	2103-1:SHAP = USHP – 3SHP	WV600 ♥	0	2	3	5	6	7	8	10
				WV700 ♥		0	0	0	0	0	0	1
	9	NYNR	3DNR:YLV = YLV + NYNR		0	1	1	1	2	2	2	2
	10	NCNR	3DNR:CLV = CLV + NCNR		0	1	1	1	2	2	2	2
	11	NYMG	3DNR:YMG = YMG – NYMG		0	0	0	0	0	0	0	0
	12	NCMG	3DNR:CMG = CMG - NCMG		0	0	0	0	0	0	0	0
	13	NYLT	3DNR:YLT = YLT – NYLT		0	1	1	0	3	4	6	8
	14	NYNC	3DNR:YNC = YNC – NYNC		1	1	1	1	2	2	2	2
	15	NYCO	3DNR:YCO = YCO – NYCO		0	0	0	0	0	0	0	0
	16	7SHP	2170-P4:USHP = USHP – (7SHP x 4)		0	0	0	0	0	1	1	1
	17	7YF1	2170-P3:F1LV = F1LV – 7YF1		0	0	1	0	2	2	2	3
	18	7LTI	2170-P3:LTLV = LTLV – 7LTI		0	0	0	0	0	0	0	0
	19	7CTI	2170-P3:CTIL = CTIL – 7CTI		0	0	0	0	0	0	0	0
	20	7VML	2170-P3:VM_LEV = VM_LEV – 7VML		0	0	0	0	0	0	0	0
	21	7VMC	2170-P3:VMCR = VMCR + 7VMCR		0	1	1	0	2	2	2	2
	22	MIDD	MIDE = MIDE - MIDD		0	0	0	0	0	0	0	0

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	DATA
CCD	0	HPRM	CCD/V-CHIP(Main) OSD H position	60 ♠
	1	HPRS	CCD/V-CHIP(Sub) OSD H position	60 ♠
	2	YSYM	Caption Background select(Main&Sub)	0
CC and	3	CCDI	Interuption count(Main&Sub)	3
V Chip	4	CRIP	CRI count & Parity count	4
	5	PHLD	Peak hold for Data slice(Main&Sub)	0
	6	CHMK	H Mask width(Main&Sub)	52
	7	LANG	V-Chip Disp. Language	2
	8	DATA	Slice data OSD on/off	0
	9	VCHP	V-CHIP Blocking function on/off	0
	10	CLMP	Clamp voltage for V-IN	0
	11	SYSV	SYNC slice voltage for V-IN	4
	12	ID1	ID-1 ON/OFF	1
	13	ID1M	ID-1 Mode	1
	14	FPOL	Field polarlity	0
	15	BWHT	Banner white level	0
	16	MESH	Banner back ground type	0
	17	BNBB	Banner back ground color-Blue	1
	18	BNBG	Banner back groung color-Green	1
	19	BNBR	Banner back ground color-Red	0
	20	CMP1	Banner back ground level1 comp	2
	21	CMP2	Banner back ground level2 comp	5
	22	CMP3	Banner back ground level3 comp	3
	23	CWHT	Caption white level	3
	24	VSDW	V sync detection width	1
	25	BFRQ	XDS banner display PLL frequency	0
	26	BPOS		0
	27	BFRM		1
	28	BTIM		0

♣	Adjustable - M Board CBA
♦	Adjustable - B Board CBA
♠	Adjustable - On Line (STD LIST)

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	DATA				
3DNR	0	WHCT	PLL Divider setting	44				
(TC90A90F)	1	NIQM	U/V input polarity	1				
	2	CLPW	A/D Clamp Pulse width	30				
	3	CLPP	A/D Clamp Pulse Phase	80				
3D Noise	4	YHBW	Y H Blanking width	138				
Reduction	5	YBKL	Y Blanking level adjustment	0				
	6	YBKO	Internal Y H Blanking ON/OFF	0				
	7	MUTE	Signal Output Muting	0				
	8	YHBS	Y H Blanking start point	40				
	9	CHBW	U/V H Blanking width	138				
	10	CBKO	U/V H Blanking start point	40				
	11	CHBO	Internal U/V H Blanking ON/OFF	0				
	12	VHBL	V H Blanking level adjustment	0				
	13	UHBL	U H Blanking level adjustment	0				
	14	UVDL	U/V output delay	0				
	15	YDL	Y output delay	0				
	16	PVDI	VD input polarity	0				
	17	PHDI	HD input polarity	0				
	18	HDW	HD pulse width	16				
	19	PVDO	VD output polarity	0				
	20	PHDO	HD output polarity	0				
	21	HST	HD out pulse start position	54				
	22	VDL	VD out Pulse start position	0				
	23	VDW	VD out Pulse width	3				
	24	NDET	Noise detection point	0				
	25	NVP	Noise detect line	2				
	26	NDTS	Noise detect sencitivity	3				
	27	HROF	H Reference pulse ON/OFF (ON=0)	0				
	28	NDGW	Noise detect gate width	9				
	29	UOFS	U Offset level	1				
	30	POT	Output Port 0/1 Control	0				
	31	UVF	UV Frag polarity	0				
	32	APC	AP Clock polarity	1				
	33	DAP	DAC power save (ON=1)	0				
	34	YLV	Y NR level	Vivid	RF/V1-V4	9	V5-V7 (480i)	8
				Standard	RF/V1-V4	9	V5-V7 (480i)	8
				Movie	RF/V1-V4	8	V5-V7 (480i)	8
				Pro	RF/V1-V4	8	V5-V7 (480i)	8
	35	YST	Setup forced standard detection	0				
	36	YNT	Y NTSC Standard detection	1				
	37	YPL	Y PAL Standard detection	1				
	38	YMV	Y Moving detection filter (ON=0)	0				
	39	YCR	Y Moving detection Coring level	Vivid	RF/V1-V4	3	V5-V7 (480i)	0
				Standard	RF/V1-V4	3	V5-V7 (480i)	0
				Movie	RF/V1-V4	3	V5-V7 (480i)	0
				Pro	RF/V1-V4	3	V5-V7 (480i)	0
	40	VOS	V Offset level	0				
	41	YMG	Y Moving detection gain	Vivid	RF/V1-V4	3	V5-V7 (480i)	3
				Standard	RF/V1-V4	3	V5-V7 (480i)	3
				Movie	RF/V1-V4	3	V5-V7 (480i)	3
				Pro	RF/V1-V4	3	V5-V7 (480i)	3

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	DATA				
3DNR	42	YEG	Y Moving detect on (ON=1)	0				
(TC90A90F)	43	YEL	Y edge moving detection sensitivity	Vivid	RF/V1-V4	6	V5-V7 (480i)	6
				Standard	RF/V1-V4	6	V5-V7 (480i)	6
				Movie	RF/V1-V4	6	V5-V7 (480i)	6
				Pro	RF/V1-V4	6	V5-V7 (480i)	6
3D Noise Reduction	44	YLM	Y NR Feed back limit level	Vivid	RF/V1-V4	6	V5-V7 (480i)	6
				Standard	RF/V1-V4	6	V5-V7 (480i)	6
				Movie	RF/V1-V4	6	V5-V7 (480i)	6
				Pro	RF/V1-V4	6	V5-V7 (480i)	6
	45	CLV	C NR level	Vivid	RF/V1-V4	9	V5-V7 (480i)	8
				Standard	RF/V1-V4	9	V5-V7 (480i)	8
				Movie	RF/V1-V4	8	V5-V7 (480i)	8
				Pro	RF/V1-V4	8	V5-V7 (480i)	8
	46	CNT	Relate C NR to YSTDN	1				
	47	CPL	Relate C NR to YSTDP	1				
	48	CMG	C Moving detection gain	Vivid	RF/V1-V4	3	V5-V7 (480i)	3
				Standard	RF/V1-V4	3	V5-V7 (480i)	3
				Movie	RF/V1-V4	3	V5-V7 (480i)	3
				Pro	RF/V1-V4	3	V5-V7 (480i)	3
	49	CCR	C Moving detection coring level	Vivid	RF/V1-V4	3	V5-V7 (480i)	0
				Standard	RF/V1-V4	3	V5-V7 (480i)	0
				Movie	RF/V1-V4	3	V5-V7 (480i)	0
				Pro	RF/V1-V4	3	V5-V7 (480i)	0
	50	CLM	C NR Feed back limit level	Vivid	RF/V1-V4	6	V5-V7 (480i)	6
				Standard	RF/V1-V4	6	V5-V7 (480i)	6
				Movie	RF/V1-V4	6	V5-V7 (480i)	6
				Pro	RF/V1-V4	6	V5-V7 (480i)	6
	51	NVSL		20				
	52	NVSH	NR Vertical start line	0				
	53	NHS	NR Horizontal start position	16				
	54	NVEL		248				
	55	NVEH	NR Vertical end line	0				
	56	NHE	NR Horizontal end position	120				
	57	YNG	Y Coring gain	Vivid	RF/V1-V4	3	V5-V7 (480i)	3
				Standard	RF/V1-V4	3	V5-V7 (480i)	3
				Movie	RF/V1-V4	3	V5-V7 (480i)	3
				Pro	RF/V1-V4	3	V5-V7 (480i)	3
	58	COR	Coring/through (Coring=0)	Vivid	RF/V1-V4	0	V5-V7 (480i)	0
				Standard	RF/V1-V4	0	V5-V7 (480i)	0
				Movie	RF/V1-V4	0	V5-V7 (480i)	0
				Pro	RF/V1-V4	0	V5-V7 (480i)	0
	59	LPF	LPF on/off (on=0)	Vivid	RF/V1-V4	0	V5-V7 (480i)	0
				Standard	RF/V1-V4	0	V5-V7 (480i)	0
				Movie	RF/V1-V4	0	V5-V7 (480i)	0
				Pro	RF/V1-V4	0	V5-V7 (480i)	0
	60	YLT	Y Coring limit level	Vivid	RF/V1-V4	6	V5-V7 (480i)	6
				Standard	RF/V1-V4	6	V5-V7 (480i)	6
				Movie	RF/V1-V4	6	V5-V7 (480i)	6
				Pro	RF/V1-V4	6	V5-V7 (480i)	6

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	DATA															
3DNR (TC90A90F) 3D Noise Reduction	61	YNC	Y Coring offset level	Vivid	RF/V1-V4	9	V5-V7 (480i)	8	* Item 61 YNC data should be the same as Item 34 YNR data.										
				Standard	RF/V1-V4	9	V5-V7 (480i)	8											
				Movie	RF/V1-V4	8	V5-V7 (480i)	8											
				Pro	RF/V1-V4	8	V5-V7 (480i)	8											
	62	YCO	Y Coring off (on=1)	Vivid	RF/V1-V4	0	V5-V7 (480i)	0											
				Standard	RF/V1-V4	0	V5-V7 (480i)	0											
				Movie	RF/V1-V4	0	V5-V7 (480i)	0											
				Pro	RF/V1-V4	0	V5-V7 (480i)	0											
	63	ADTH	0: DNR, 1: AD	0															
DRCV (CXD2097) DRC-VOL	0	MFVR	DRC ID [0: DRC-VOL, 1: DRC-MF]	0															
	1	ISEL	Input select [0:A/D 1:3DNR]	1															
	2	ORES	Reality (Resolution Effect) Offset	Vivid	RF	128	V1-V4	128	V5, V6	128	V7	128							
				Standard	RF	128	V1-V4	128	V5, V6	128	V7	128							
				Movie	RF	128	V1-V4	128	V5, V6	128	V7	128							
				Pro	RF	128	V1-V4	128	V5, V6	128	V7	128							
	3	ONCT	Clarity (Noise Effect) Offset	Vivid	RF	128	V1-V4	128	V5, V6	128	V7	128							
				Standard	RF	128	V1-V4	128	V5, V6	128	V7	128							
				Movie	RF	128	V1-V4	128	V5, V6	128	V7	128							
				Pro	RF	128	V1-V4	128	V5, V6	128	V7	128							
	4	AINI	User Clarity (Noise) Initial Position	CUSTOM1	0	CUSTOM2	49	CUSTOM3	79										
	5	BINI	User Reality (Resolution) Initial Position	CUSTOM1	24	CUSTOM2	54	CUSTOM3	89										
	6	FMAT	Film Mode Automatic 525P [1: ON, 0: OFF]	0															
	7	FMTH	Film Mode Threshold	Other	1	RF	1	[0: DVD, 1: CXD2095, 2: air strong electric fields, 3: air medium electric fields]											
	8	FSEL	Y Horizontal Filter [1: OFF, 0: ON]	1															
	9	CDLY	C-Y Delay	2															
	10	LMIT	Peak Limiter [1: Slew, 0: Limiter ON]	0															
	11	LMLV	Limit Level	Vivid	2	Standard	2	Movie	2	Pro	2								
	12	LMSL	Peak Limiter Ref. for Progressive	1	[1: Automatic, 0: Fixed]														
	13	VDLY	Input vertical signal delay	1															
	14	VDPR	Vertical Signal Sample Timing Switch	3	[Normally High]														
	15	WPLL	TBC Horizontal Phase Switching	2	[Normally High]														
	16	CRCT	Text Countermeasures Circuit [1: ON, 0: OFF]	0															
	17	NRA		SNNR(1)	0	SNNR(2)	0	SNNR(3)	0	SNNR(4)	0	SNNR(5)	0	SNNR(6)	0	SNNR(7)	0		
	18	NRB		SNNR(1)	128	SNNR(2)	128	SNNR(3)	128	SNNR(4)	128	SNNR(5)	128	SNNR(6)	128	SNNR(7)	128		

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	MIN	MAX	Full / Normal	Zoom	WideZoom	1080i
PJE	0	FDIS	Display fine adjustment data	0	1	1			
	1	AREA	Model Select [0: GA, 1: US, 2: Europe]	0	2	1			
	2	COPY	Service copy adjustment	0	1	0			
	3	ALCP	Service all copy adjustment	0	1	0			
	4	OSDH	Osd horiz position of PJED service menu	1	255	11			
	5	OSDV	Osd vert pos of PJED service menu	1	255	57	106	78	15
	6	FVSL	Start position of fine adjustment	0	15	0	14	15	0
	7	FVSP	Start line of fine adjustment	0	255	3	21	25	53
	8	V1DL	Value of V1 delay	0	255	1	140	61	1
	9	V1CU	Value of V1 count up	0	4095	454	598	506	387
	10	V1OH	Value of V1 offset upper data	0	255	5	5	5	79
	11	COHP	Horizontal phase for rough adjustment	0	4095	0			
	12	FIHP	Horizontal phase for fine adjustment	0	4095	1111			
	13	TPHP	Horizontal phase for test pattern	0	4095	72			
	14	TPVP	Vertical phase for test pattern	0	255	55	111	79	15
	15	DFHP	H phase for dyn focus (57")	0	4095	190			
			H phase for dyn focus (65")			190			
			H phase for dyn focus (65" 4% bigger)			200			
	16	DFHG	H parabola for dyn focus (57")	-128	127	-85	-85	-85	-85
			H parabola for dyn focus (65")			-100	-100	-100	-100
			H parabola for dyn focus (65" 4% bigger)			-95	-95	-95	-95
	17	DFVG	V parabola for dyn focus (57")	-128	127	-65	-65	-65	-65
			V parabola for dyn focus (65")			-70	-70	-70	-70
			V parabola for dyn focus (65" 4% bigger)			-95	-95	-95	-95
	18	DFDC	Center for dyn focus (57")	-128	127	127	127	127	127
			Center for dyn focus (65")			127	127	127	127
			Center for dyn focus (65" 4% bigger)			127	127	127	127
	19	DFV1	V1 saw for dyn focus (57")	-128	127	-50	-50	-50	-50
			V1 saw for dyn focus (65")			-50	-50	-50	-50
			V1 saw for dyn focus (65" 4% bigger)			-50	-50	-50	-50
	20	SDHP	Compensation of horiz phase for shading	0	4095	500			
	21	SDH1	Horizontal saw wave for dynamic focus	-128	127	127	127	127	127
	22	BDVU	Vertical position for border line 1	0	2047	27	21	12	53
	23	BDVL	Vertical position for border line 2	0	2047	901	683	820	1035
	24	BDHL	Horizontal position for boder line 1	0	2047	152	152	145	152
	25	BDHR	Horizontal position for boder line 2	0	2047	1254	1254	1261	1254
	26	HBLD	Horizontal phase for output of H.Blank out	0	4095	32			
	27	HBLW	Width for output of H.Blank out	0	4095	143			
	28	PWM2	PWM2 Regi IC output width (57")	0	4095	730			
			PWM2 Regi IC output width (65")			730			
			PWM2 Regi IC output width (65" 4% bigger)			730			

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	MIN	MAX	DATA
PJE	29	R0GH	Green Horizontal Sensor 0 Ratio Offset	-128	127	-
	30	R0RH	Red Horizontal Sensor 0 Ratio Offset	-128	127	-
	31	R0BH	Blue Horizontal Sensor 0 Ratio Offset	-128	127	-
	32	R1GH	Green Horizontal Sensor 1 Ratio Offset	-128	127	-
	33	R1RH	Red Horizontal Sensor 1 Ratio Offset	-128	127	-
	34	R1BH	Blue Horizontal Sensor 1 Ratio Offset	-128	127	-
	35	R1GV	Green Vertical Sensor 1 Ratio Offset	-128	127	-
	36	R1RV	Red Vertical Sensor 1 Ratio Offset	-128	127	-
	37	R1BV	Blue Vertical Sensor 1 Ratio Offset	-128	127	-
	38	R2GH	Green Horizontal Sensor 2 Ratio Offset	-128	127	-
	39	R2RH	Red Horizontal Sensor 2 Ratio Offset	-128	127	-
	40	R2BH	Blue Horizontal Sensor 2 Ratio Offset	-128	127	-
	41	R2GV	Green Vertical Sensor 2 Ratio Offset	-128	127	-
	42	R2RV	Red Vertical Sensor 2 Ratio Offset	-128	127	-
	43	R2BV	Blue Vertical Sensor 2 Ratio Offset	-128	127	-
	44	R3GH	Green Horizontal Sensor 3 Ratio Offset	-128	127	-
	45	R3RH	Red Horizontal Sensor 3 Ratio Offset	-128	127	-
	46	R3BH	Blue Horizontal Sensor 3 Ratio Offset	-128	127	-
	47	PTRH	Red Horiz Top Pattern Position Offset	-128	127	-
	48	PTBH	Blue Horiz Top Pattern Position Offset	-128	127	-
	49	PLRH	Red Horiz Left Pattern Position Offset	-128	127	-
	50	PLBH	Blue Horiz Left Pattern Position Offset	-128	127	-
	51	PLRV	Red Vertical Left Pattern Position Offset	-128	127	-
	52	PLBV	Blue Vertical Left Pattern Position Offset	-128	127	-
	53	PRRH	Red Horiz Right Pattern Position Offset	-128	127	-
	54	PRBH	Blue Horiz Right Pattern Pos Offset	-128	127	-
	55	PRGV	Green Vertical Right Pattern Pos Offset	-128	127	-
	56	PRRV	Red Vertical Right Pattern Pos Offset	-128	127	-
	57	PRBV	Blue Vertical Right Pattern Pos Offset	-128	127	-
	58	PBGH	Green Horiz Bottom Pattern Pos Offset	-128	127	-
	59	PBRH	Red Horiz Bottom Pattern Pos Offset	-128	127	-
	60	PBBH	Blue Horiz Bottom Pattern Pos Offset	-128	127	-

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION	MIN	MAX												
PJE	61	ERR	Auto Regi. Error code	0	-	0											
	62	ADTM	A/D data input timing of Auto Regi.	0	127	81											
	63	ADT2	A/D data input timing of Auto Regi. #2	0	255	115											
	64	SZLM	Size Limit	-128	127	0											
	65	RTLM	Ratio Limit	0	127	90											
	66	VUP	Auto Regi. Pattern Upper V position	0	2047	57"	41	65"	41								
	67	VMID	Auto Regi. Pattern Middle V position	0	2047	57"	505	65"	505								
	68	VLOW	Auto Regi. Pattern Lower V position	0	2047	57"	971	65"	971								
	69	HLE	Auto Regi. Pattern left H position	0	4095	57"	55	65"	55								
	70	HMID	Auto Regi. Pattern middle H position	0	4095	57"	636	65"	636								
	71	HRIV	Auto Regi. Pattern right H position	0	4095	57"	1217	65"	1217								
	72	TEST				0											
	73	SFTF	Fast motion of burn prevention switch	0	1	0											
	74	SFTE	CRT burn prevention enable	0	5	4											
	75	ACTL	Acount timer counter lower byte	0	-	0											
	76	ACTH	Acount timer counter upper byte	0	-	0											
	77	ATTN	Auto Regi adjustment item select	0	3	57"	0	65"	0								
	78	VB1S	VBLKOUT1 Horizontal Phase	0	1023	Full / Normal	0	Zoom	0	W Zoom	0	1080i	0				
	79	VB1W	VBLKOUT1 Output Width	0	1023	Full / Normal	16	Zoom	16	W Zoom	16	1080i	16				
	80	VB2S	VBLKOUT2 Horizontal Phase	0	1023	Full / Normal	0	Zoom	0	W Zoom	0	1080i	0				
	81	VB2W	VBLKOUT2 Output Width	0	1023	Full / Normal	54	Zoom	110	W Zoom	72	1080i	24				
	82	VB3S	VBLKOUT3 Horizontal Phase	0	1023	Full / Normal	520	Zoom	464	W Zoom	502	1080i	550				
	83	VB3W	VBLKOUT3 Output Width	0	1023	Full / Normal	42	Zoom	98	W Zoom	60	1080i	12				
	84	VB4S	VBLKOUT4 Horizontal Phase			Full / Normal	0	Zoom	0	W Zoom	0	1080i	7				
	85	VB4W	VBLKOUT4 Output Width			Full / Normal	5	Zoom	5	W Zoom	5	1080i	5				

						Full / Normal ♠						Zoom ♠					
						Green		Blue		Red		Green		Blue		Red	
	CENT	Center Registration Adjustment	-512	511	35	20	35	20	35	20	35	20	35	20	35	20
	SKEW	Skew Registration Adjustment	-512	511	0	0	0	0	0	0	0	0	0	0	0	0
	SIZE	Size Registration Adjustment	-512	511	-100	-75	-100	-75	-100	-75	-100	-75	-100	-75	-100	-75
	LIN	Linearity Registration Adjustment	-512	511	0	0	-425	0	425	0	0	0	-425	0	425	0
	KEY	Keystone Registration Adjustment	-512	511	N/A	0	N/A	-120	N/A	120	N/A	0	N/A	-120	N/A	120
	PIN	Pincushion Registration Adjustment	-512	511	0	400	0	350	0	350	0	400	0	350	0	350
	MLIN	Middle Linearity Registration Adjustment	-512	511	0	N/A	150	N/A	-150	N/A	0	N/A	150	N/A	-150	N/A
	MSIZ	Middle Size Registration Adjustment	-512	511	-200	N/A	-100	N/A	-100	N/A	-200	N/A	-100	N/A	-100	N/A

						Wide Zoom ♠						1080i / Twin ♠					
						Green		Blue		Red		Green		Blue		Red	
	CENT	Center Registration Adjustment	-512	511	35	20	35	20	35	20	35	20	35	20	35	20
	SKEW	Skew Registration Adjustment	-512	511	0	0	0	0	0	0	0	0	0	0	0	0
	SIZE	Size Registration Adjustment	-512	511	-100	-75	-100	-75	-100	-75	-100	-75	-100	-75	-100	-75
	LIN	Linearity Registration Adjustment	-512	511	0	0	-425	0	425	0	0	0	-425	0	425	0
	KEY	Keystone Registration Adjustment	-512	511	N/A	0	N/A	-120	N/A	120	N/A	0	N/A	-120	N/A	120
	PIN	Pincushion Registration Adjustment	-512	511	0	400	0	350	0	350	0	400	0	350	0	350
	MLIN	Middle Linearity Registration Adjustment	-512	511	0	N/A	150	N/A	-150	N/A	0	N/A	150	N/A	-150	N/A
	MSIZ	Middle Size Registration Adjustment	-512	511	-200	N/A	-100	N/A	-100	N/A	-200	N/A	-100	N/A	-100	N/A

♣ Adjustable - M Board CBA
♦ Adjustable - B Board CBA
♠ Adjustable - On Line (STD LIST)

[0: Off, 1: 120sec, 2: 60sec, 3: 30sec, 4: 15sec, 5: 8sec]

* PJE INIT (7+ENTER) writes "0" only to sub deflection presets and fine regi data of the deflection mode you are in.

* FINE Adjustment should be limited to less than +-107 steps for each point.

SERVICE DATA LISTS

CATEGORY	#	ITEM	DESCRIPTION			DATA
OP	0	DLY1	Delay time1 of power on sequence			12
	1	DLY2	Delay time2 of power on sequence			18
	2	DLY3	Delay time3 of power on sequence			7
	3	OSDH	OSD H position [0:LEFT, 254:RIGHT]			13 ♠
	4	HDPT	1080i through sw [0:through, 1:MID]			1
	5	MSBG	Memory Stic Background Color			80
	6	AACK	Audio DSP ACK Checking Switch			2
	7	RAMW	RAM window display [0:OFF, 1:DISPLAY]			0

♣ Adjustable - M Board CBA
♦ Adjustable - B Board CBA
♠ djustable - On Line (STD LIS

[0: No checking at mode change / refresh, 1: Checking at refresh only, 2: Checking at mode change / refresh, 3: N/A]

CATEGORY	#	ITEM	DESCRIPTION	DATA	INDEX Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
ID					Korean	French	Portuguese	Spanish	English	PAL-N	PAL-M	NTSC
	0	ID0	Language/System	89	0	1	0	1	1	0	0	1
					DVI input	V3 - S Video	V2 - S Video	V1 - S Video	Video4	Video3	Video2	Video1
	1	ID1	Video Input	255	1	1	1	1	1	1	1	1
					Auto Vol	Auto Mute	Surround1	Surround0	Audio out	Bass/Treb/Bal	Spkr SW	MTS
	2	ID2	Audio	239	1	1	1	0	1	1	1	1
					AC stay off	Front Panel Cntr	Vchip-US	Vchip-Canada	2:3Pull	Key power	Stereo/main	DRC Vol
	3	ID3	Etc	107	0	1	1	0	1	0	1	1
					Tilt Corr	3D Comb	No-sig. auto off	CH block	Comb	Spot Kil	XDS	CC
	4	ID4	Etc2	75	0	1	0	0	1	0	1	1
					Wideband VM	NR	Color Temp	VM	TV out	MS "ACCESS" off	MS Button toggle	Mem Stic
	5	ID5	Etc3	243	1	1	1	1	0	0	1	1
						Scrolling Index	MultPic 1	MultPic 0	Attenna SW 1	Attenna SW 0	2Tu PIP	1Tu PIP
	6	ID6	Sub Picture	126	0	1	1	1	1	1	1	0
						Latin	PIP for Twin	AutoSAP	XBR / HS	Center SP	PJ / Direct View	Widescrn
	7	ID7	Etc4	27	0	0	0	1	1	0	1	1

INITIALIZATION SEQUENCES

MID NVM only (MAIN_A8):	7+JUMP+Enter
Main NVM only (MAIN_A0)	7+9+Enter
All NVM including PJED: (PJED_A0 + MAIN_A0 + MAIN_A8	7+Audio Effect+Enter
PJED REGISTRATION DATA only	7+Enter (in PJE service)

2-11-1. MODEL NVM DIFFERENCE

SERVICE ITEM				
ITEM	57WV600	65WV600	57WV700	65WV700
2170P-4 8 - UBRT (VIVID)	19	19	28	28
2170P-4 10 - USHP (VIVID)	25	25	29	29
2170P-4 7 - UPIC (STANDARD)	47	47	50	50
2170P-4 8 - UBRT (STANDARD)	31	31	36	36
2170P-4 7 - UPIC (MOVIE)	18	18	20	20
2170P-4 8 - UBRT (MOVIE)	31	31	34	34
2170P-4 22 - BLK (1080iV5-6, VIVID)	3	3	2	2
2170P-4 22 - BLK (720PV5-6, VIVID)	3	3	2	2
2170P-4 22 - BLK (1080iV7, VIVID)	3	3	2	2
2170P-4 22 - BLK (720PV7, VIVID)	3	3	2	2
2170P-4 22 - BLK (MS PLAY, VIVID)	3	3	2	2
2170P-4 19 - GAMR (GAMM=1)	4	4	6	6
2170P-4 20 - GAMG (GAMM=1)	4	4	6	6
2170P-4 21 - GAMB (GAMM=1)	4	4	6	6
2170P-4 19 - GAMR (GAMM=2)	3	3	4	4
2170P-4 20 - GAMG (GAMM=2)	3	3	4	4
2170P-4 21 - GAMB (GAMM=2)	3	3	4	4
2170P-4 19 - GAMR (GAMM=3)	7	7	9	9
2170P-4 20 - GAMG (GAMM=3)	7	7	9	9
2170P-4 21 - GAMB (GAMM=3)	7	7	9	9
2170P-4 23 - DCTR (BLK=1)	10	10	5	5
2170P-4 24 - APED (BLK=1)	2	2	1	1
2170P-4 23 - DCTR (BLK=3)	15	15	8	8
SNNR 5 - CCOR (SNNR=1)	2	2	0	0
SNNR 8 - 3SHP (SNNR=1)	2	2	0	0
SNNR 5 - CCOR (SNNR=2)	2	2	1	1
SNNR 8 - 3SHP (SNNR=2)	3	3	0	0
SNNR 5 - CCOR (SNNR=3)	2	2	1	1
SNNR 8 - 3SHP (SNNR=3)	5	5	0	0
SNNR 8 - 3SHP (SNNR=4)	6	6	0	0
SNNR 5 - CCOR (SNNR=5)	3	3	2	2
SNNR 8 - 3SHP (SNNR=5)	7	7	0	0
SNNR 8 - 3SHP (SNNR=6)	8	8	0	0
SNNR 8 - 3SHP (SNNR=7)	10	10	1	1
2170P-3 15 - UHOF (1080iV7, VIVID)	1	1	2	2

SERVICE ITEM				
ITEM	57WV600	65WV600	57WV700	65WV700
2170P-3 4 - VMF0 (RF, VIVID)	0	0	2	2
2170P-3 5 - VMDL (RF, VIVID)	15	15	8	8
2170P-3 6 - SHOF (RF, VIVID)	0	0	2	2
2170P-3 14 - UCOF (RF, VIVID)	3	3	0	0
2170P-3 4 - VMF0 (V1-4, VIVID)	0	0	2	2
2170P-3 5 - VMDL (V1-4, VIVID)	15	15	8	8
2170P-3 13 - UBOF (V1-4, VIVID)	2	2	3	3
2170P-3 14 - UCOF (V1-4, VIVID)	3	3	1	1
2170P-3 15 - UHOF (V1-4, VIVID)	0	0	3	3
2170P-3 4 - VMF0 (480iV5-6, VIVID)	1	1	2	2
2170P-3 5 - VMDL (480iV5-6, VIVID)	11	11	8	8
2170P-3 6 - SHOF (480iV5-6, VIVID)	2	2	1	1
2170P-3 13 - UBOF (480iV5-6, VIVID)	4	4	3	3
2170P-3 14 - UCOF (480iV5-6, VIVID)	3	3	1	1
2170P-3 15 - UHOF (480iV5-6, VIVID)	1	1	3	3
2170P-3 4 - VMF0 (480PV5-6, VIVID)	1	1	2	2
2170P-3 5 - VMDL (480PV5-6, VIVID)	11	11	8	8
2170P-3 15 - UHOF (480PV5-6, VIVID)	0	0	2	2
2170P-3 6 - SHOF (1080iV5-6, VIVID)	3	2	2	2
2170P-3 14 - UCOF (1080iV5-6, VIVID)	2	1	3	3
2170P-3 15 - UHOF (1080iV5-6, VIVID)	1	1	2	2
2170P-3 6 - SHOF (720PV5-6, VIVID)	3	2	2	2
2170P-3 14 - UCOF (720PV5-6, VIVID)	2	1	3	3
2170P-3 15 - UHOF (720PV5-6, VIVID)	1	1	2	2
2170P-3 4 - VMF0 (480iV7, VIVID)	1	1	2	2
2170P-3 5 - VMDL (480iV7, VIVID)	11	11	8	8
2170P-3 6 - SHOF (480iV7, VIVID)	2	2	1	1
2170P-3 13 - UBOF (480iV7, VIVID)	4	4	3	3
2170P-3 14 - UCOF (480iV7, VIVID)	3	3	1	1
2170P-3 15 - UHOF (480iV7, VIVID)	1	1	3	3
2170P-3 4 - VMF0 (480PV7, VIVID)	1	1	2	2
2170P-3 5 - VMDL (480PV7, VIVID)	11	11	8	8
2170P-3 15 - UHOF (480PV7, VIVID)	0	0	2	2
2170P-3 6 - SHOF (1080iV7, VIVID)	3	2	2	2
2170P-3 14 - UCOF (1080iV7, VIVID)	2	1	3	3

MODEL NVM DIFFERENCE

SERVICE ITEM				
ITEM	57WV600	65WV600	57WV700	65WV700
2170P-3 6 - SHOF (720PV7, VIVID)	3	2	2	2
2170P-3 14 - UCOF (720PV7, VIVID)	2	1	3	3
2170P-3 15 - UHOF (720PV7, VIVID)	1	1	2	2
2170P-3 6 - SHOF (MS PLAY, VIVID)	3	2	2	2
2170P-3 14 - UCOF (MS PLAY, VIVID)	2	1	3	3
2170P-3 15 - UHOF (MS PLAY, VIVID)	1	1	2	2
2170P-3 4 - VMF0 (TWIN, VIVID)	0	0	2	2
2170P-3 5 - VMDL (TWIN, VIVID)	15	15	8	8
2170P-3 13 - UBOF (TWIN, VIVID)	4	4	0	0
2170P-3 14 - UCOF (TWIN, VIVID)	2	1	0	0
2170P-3 4 - VMF0 (RF, STANDARD)	0	0	2	2
2170P-3 5 - VMDL (RF, STANDARD)	15	15	8	8
2170P-3 6 - SHOF (RF, STANDARD)	0	0	2	2
2170P-3 14 - UCOF (RF, STANDARD)	1	1	0	0
2170P-3 15 - UHOF (RF, STANDARD)	1	1	2	2
2170P-3 4 - VMF0 (V1-4, STANDARD)	0	0	2	2
2170P-3 5 - VMDL (V1-4, STANDARD)	15	15	8	8
2170P-3 6 - SHOF (V1-4, STANDARD)	1	1	2	2
2170P-3 13 - UBOF (V1-4, STANDARD)	1	1	0	0
2170P-3 14 - UCOF (V1-4, STANDARD)	2	2	0	0
2170P-3 15 - UHOF (V1-4, STANDARD)	0	0	3	3
2170P-3 4 - VMF0 (480iV5-6, STANDARD)	1	1	2	2
2170P-3 5 - VMDL (480iV5-6, STANDARD)	11	11	8	8
2170P-3 6 - SHOF (480iV5-6, STANDARD)	1	1	2	2
2170P-3 15 - UHOF (480iV5-6, STANDARD)	1	1	3	3
2170P-3 4 - VMF0 (480PV5-6, STANDARD)	1	1	2	2
2170P-3 5 - VMDL (480PV5-6, STANDARD)	11	11	8	8
2170P-3 6 - SHOF (480PV5-6, STANDARD)	1	1	0	0
2170P-3 14 - UCOF (480PV5-6, STANDARD)	1	1	0	0
2170P-3 15 - UHOF (480PV5-6, STANDARD)	0	0	2	2
2170P-3 14 - UCOF (1080iV5-6, STANDARD)	0	0	1	1
2170P-3 15 - UHOF (1080iV5-6, STANDARD)	1	1	2	2
2170P-3 14 - UCOF (720PV5-6, STANDARD)	0	0	1	1
2170P-3 15 - UHOF (720PV5-6, STANDARD)	1	1	2	2
MID5 1 - MHLY (POP 5)	1	1	2	2

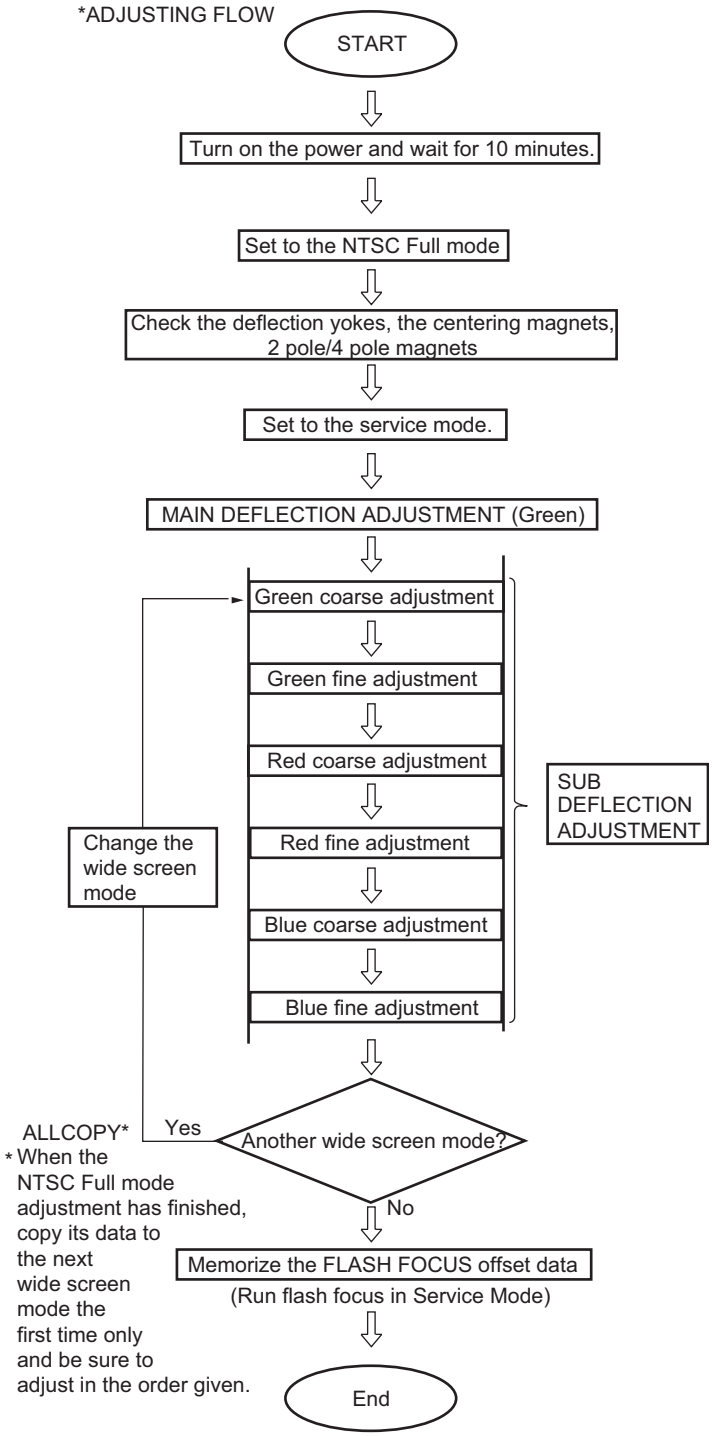
SERVICE ITEM				
ITEM	57WV600	65WV600	57WV700	65WV700
2170P-3 4 - VMF0 (480iV7, STANDARD)	1	1	2	2
2170P-3 5 - VMDL (480iV7, STANDARD)	11	11	8	8
2170P-3 6 - SHOF (480iV7, STANDARD)	1	1	2	2
2170P-3 15 - UHOF (480iV7, STANDARD)	1	1	3	3
2170P-3 4 - VMF0 (480PV7, STANDARD)	1	1	2	2
2170P-3 5 - VMDL (480PV7, STANDARD)	11	11	8	8
2170P-3 6 - SHOF (480PV7, STANDARD)	1	1	0	0
2170P-3 15 - UHOF (480PV7, STANDARD)	0	0	2	2
2170P-3 14 - UCOF (1080iV7, STANDARD)	0	0	1	1
2170P-3 15 - UHOF (1080iV7, STANDARD)	1	1	2	2
2170P-3 14 - UCOF (720PV7, STANDARD)	0	0	1	1
2170P-3 15 - UHOF (720PV7, STANDARD)	1	1	2	2
2170P-3 14 - UCOF (MS PLAY, STANDARD)	0	0	1	1
2170P-3 15 - UHOF (MS PLAY, STANDARD)	1	1	2	2
2170P-3 4 - VMF0 (TWIN, STANDARD)	0	0	2	2
2170P-3 5 - VMDL (TWIN, STANDARD)	15	15	8	8
2170P-3 13 - UBOF (RF, STANDARD)	1	1	5	5
2103-1 6 - SHAP (OTHERS)	11	11	6	6
2103-1 6 - SHAP (V1-4)	11	11	8	8
2103-1 24 - ATPD (TWIN BLK=1)	1	1	3	3
2103-1 25 - DCTR (TWIN BLK=1)	2	2	3	3
3DCOMB 21 - YHCO	3	3	2	2
3DCOMB 18 - YPFG (V1-4, MOVIE)	6	6	5	5
AUDIO 10 - STRE	4	5	4	5
AUDIO 2 - BACV	1	2	1	2
AUDIO 16 - BBEL (SURROUND OFF, S.S. OF	1	2	1	2
AUDIO 16 - BBEL (SURROUND OFF, S.S. AU	1	2	1	2
AUDIO 16 - BBEL (TRUSURROUND)	1	3	1	3
AUDIO 16 - BBEL (SIMULATED)	1	2	1	2
2170P-3 14 - UCOF (MS MENU, VIVID)	2	1	3	3
2170P-3 15 - UHOF (MS MENU, VIVID)	1	1	2	2
2170P-3 14 - UCOF (MS MENU, STANDARD)	0	0	1	1
2170P-3 15 - UHOF (MS MENU, STANDARD)	1	1	2	2
2170P-4 22 - BLK (MS MENU, VIVID)	3	3	2	2
MID5 1 - MHLY (POP 0)	1	1	2	2

MODEL NVM DIFFERENCE

SERVICE ITEM				
ITEM	57WV600	65WV600	57WV700	65WV700
MID5 6 - MHYL (POP 5)	1	1	2	2
MID5 7 - MHYE (POP 5)	0	0	7	7
MID5 15 - MVYE (POP 5)	5	5	3	3
MID5 1 - MHLY (POP 7)	1	1	2	2
MID5 6 - MHYL (POP 7)	1	1	2	2
MID5 7 - MHYE (POP 7)	0	0	7	7
MID5 13 - MVYR (POP 7)	3	3	2	2
MID5 15 - MVYE (POP 7)	5	5	3	3
MID5 5 - MHYR (POP 11)	1	1	2	2
MID5 6 - MHYL (POP 11)	1	1	2	2
MID5 7 - MHYE (POP 11)	7	7	4	4
MID5 13 - MVYR (POP 11)	1	1	2	2
MID5 15 - MVYE (POP 11)	5	5	3	3
MID5 5 - MHYR (POP 12)	1	1	2	2
MID5 6 - MHYL (POP 12)	1	1	2	2
MID5 13 - MVYR (POP 12)	1	1	3	3
MID5 15 - MVYE (POP 12)	5	5	3	3
MID5 7 - MHYE (POP 16)	7	7	2	2
MID5 15 - MVYE (POP 16)	5	5	3	3
MID5 5 - MHYR (POP 17)	1	1	3	3
MID5 15 - MVYE (POP 17)	7	7	5	5
MID5 5 - MHYR (POP 21)	1	1	2	2
MID5 6 - MHYL (POP 21)	1	1	2	2
MID5 7 - MHYE (POP 21)	4	4	0	0
MID5 13 - MVYR (POP 21)	1	1	2	2
MID5 15 - MVYE (POP 21)	5	5	3	3
MID5 7 - MHYE (POP 22)	0	0	4	4
MID5 13 - MVYR (POP 22)	1	1	2	2
MID5 15 - MVYE (POP 22)	7	7	5	5

SERVICE ITEM				
ITEM	57WV600	65WV600	57WV700	65WV700
PJE 16 - DFHG	-85	-100	-85	-100
PJE 17 - DFVG	-65	-70	-65	-70

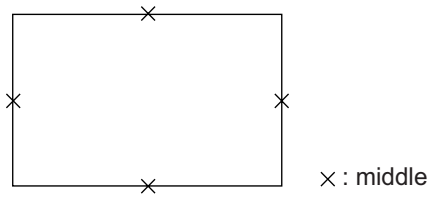
2-12. REGISTRATION ADJUSTMENT (PJE MODE ONLY)



2-12-1. SETUP FOR ADJUSTMENT

MARKING

- At the 4 sides of the screen, locate the middle. Use a tape measure to identify the middle.



DATA SETTING

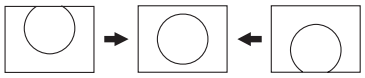
1. Set NTSC Full mode.
2. Enter the service mode, and select “PJE”.

2-12-2. MAIN DEFLECTION ADJUSTMENT

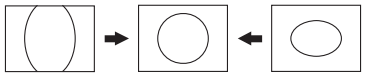
NOTE: Before this adjustment, refer to section 2-11 for PJE item #78-85 input data.

1. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
2. Enter the monoscope signal and set to NTSC Full mode.
3. Enter the service mode, and select “2170D-1”.
4. Adjust “0 VPOS” and “1 VSIZ” so that the picture is displayed in the center of the screen.
5. Adjust “2VSZ0” for 1080i vertical size adjustment.

0 VPOS



1 V-Size

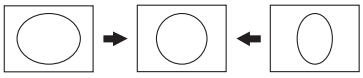


6. Select “2170D-2” and adjust “2 H-Size” so that the picture size is within the specification.

SPEC Overscan Spec. = 9%

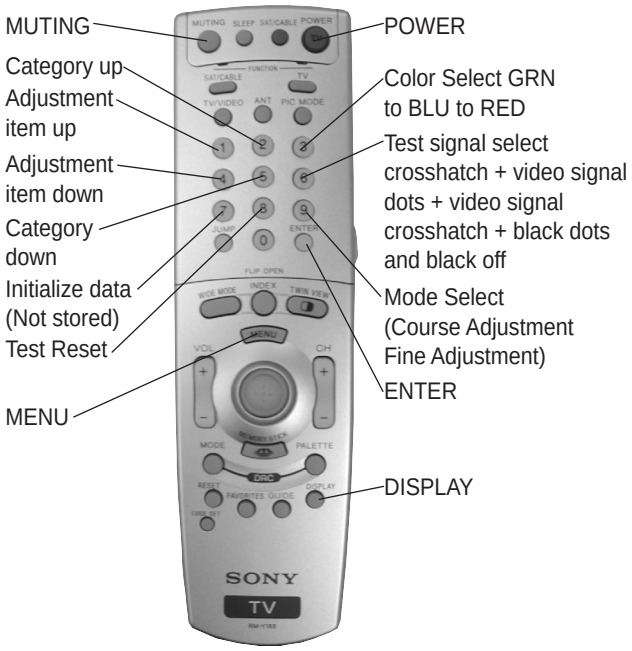
Input Signal	H SIZE	V SIZE
Monoscope	15.6 ± 0.2 sq.	11.5 ± 0.2 sq.

2 H-Size



7. Copy the data of the NTSC Full mode to the other wide screen mode and, if necessary, adjust in the other mode.

2-12-3.OPERATION METHOD FOR PROJECTOR ENGINE MODE



RM-Y188

1. FUNCTION OF KEYS ON COMMANDER

1 Changes adjustment item. (Item # moves up)
Marker moves clockwise from center to outside.
(In Fine Adjustment mode)

4 Changes adjustment item. (Item # moves down)
Marker moves counter clockwise from outside to center.
(In Fine Adjustment mode)

2 Changes adjustment category.
(Category # moves up)

5 Changes adjustment category.
(Category # moves down)

Joystick Changes data value. (Up or down)
Marker moves clockwise from center
(up, down, right, and then left) to outside.
(In Fine Adjustment mode)

3 Changes adjustment color.
GRN →BLU →RED

6 Displays or changes internal test signals.
crosshatch + external signal →
crosshatch + borderline →
crosshatch only →
dot only → off

9 Switches adjustment mode.
Coarse adjustment model →
Fine adjustment mode

Press Switches marker moving method.

Joystick (In Fine Adjustment mode)

Pressing down on the joystick in Fine Adjustment mode switches between selecting and un-selecting a point.

When a point is selected, the cursor changes to that color to indicate the point is selected and can be adjusted. If a point is not selected the cursor is white.

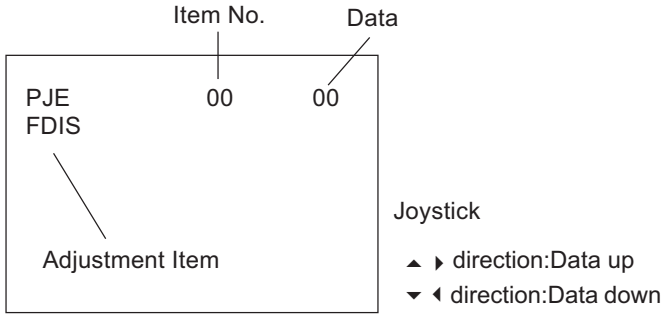
Joystick ▲ ▼ ◀ ▶ keys → **1** and **4** buttons

Commander Function

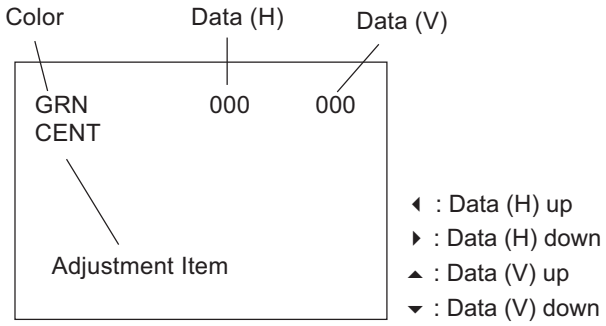
Buttons	Mode	Description
0 + ENTER	READ	Reads data to NVM.
MUTING+ENTER	WRITE	Writes data from NVM.
7 + ENTER	PJE INITIAL	Service data initialization. Not stored. (Be sure not to use usually)

2. OPERATION METHOD FOR COARSE ADJUSTMENT

1. Enter the service mode and select “PJE”.
2. Press the “1” or “4” button on the remote commander to select the item, and then use the joystick to change the data.



3. Select “GRN CENT”. When BLU or RED is displayed, press the “3” button on the remote commander to change the adjustment color in the order of GRN →BLU →RED.
4. In the GRN, BLU, or RED mode, move the joystick ▲ or ▼ to change the data in vertical direction, or ◀ or ▶ to change the data in a horizontal direction.

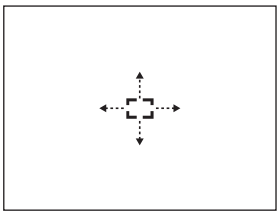


5. Before returning to the service mode, press the “MUTING” + “ENTER” buttons on the remote commander to write the data. (You must complete step 5 to write the data. If you omit step 5 the set data is returned to the data prior to the adjustment.)

3. OPERATION METHOD FOR FINE ADJUSTMENT

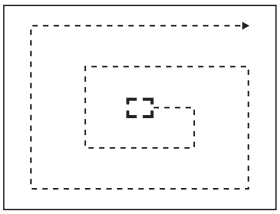
1. Enter the service mode and select “PJE”.
2. Select FDIS and set the data to “01” so that the data at each position can be displayed in fine adjustment mode.
3. Press the “9” button on the remote commander and fine adjustment mode will be active where a green marker appears in the center of the screen. (In the case of GRN mode)
4. Press down on the joystick, and the marker color will be alternately switched between green (GRN mode) and white.
5. Press the “1” or “4” button on the remote commander or use the joystick to move the marker to the position to be adjusted, where fine adjustment can be made.

* When the marker color is white:
(in this case, fine adjustment is disabled)



Use the joystick to move the marker up, down, left, or right.

* When the marker color is green:
(GRN mode)

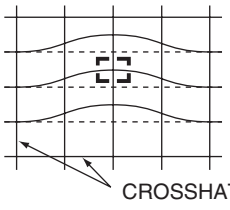


1 : Moves the marker clockwise from the center to the outside.

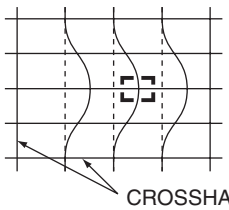
4 : Moves the marker counter clockwise from the outside to the center.

* Fine adjustment can be made on the basis of a marker position using the joystick to move ▲ ▼ ◀ or ▶.

Move joystick ▲ direction



Move joystick ▶ direction



6. Press the “9” button on the remote commander to return to the coarse adjustment mode.

2-13. PJE ADJUSTMENT (SUB DEFLECTION ADJUSTMENT)

Adjustment item	Adjustment type		
	G	R	B
	H/V*	H/V*	H/V*
CENT	O/O	O/O	O/O
SKEW	O/O	O/O	O/O
SIZE	O/O	O/O	O/O
LIN	O/O	O/O	O/O
KEY	-/O	-/O	-/O
PIN	O/O	O/O	O/O
MLIN	O/-	O/-	O/-
MSIZ	O/-	O/-	O/-

* H = Horizontal V = Vertical O = Yes - = No

Note: If the value is over the limit value, adjust these in the fine adjustment.

Coarse Data Limit Value:

CENT H	-135 TO + 205
CENT V	-150 TO + 190
SKEW	-75 TO + 75
SIZE H	-75 MAX
BLUE H LIN	-425 MIN
RED H LIN	+425 MAX
FINE DATA LIMIT Except the extreme left & right outside columns which have no limit	± 107

2-13-1.ADJUSTMENT FOR NTSC FULL MODE

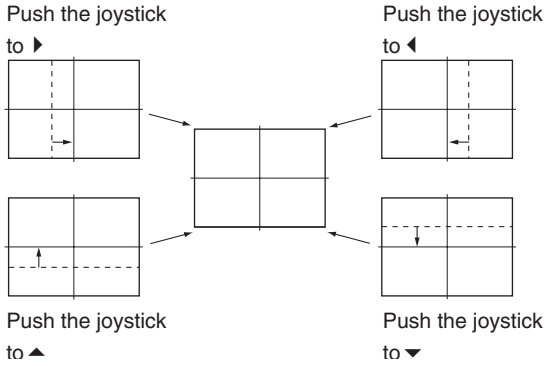
- The adjustment should be done in the numerical order given.

1) GREEN ADJUSTMENT

1. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
2. Enter the monoscope signal to set.
3. Select the PJE mode.
4. Press the “6” button on the remote commander to display the internal test signal (crosshatch).
5. Select “GRN CENT”, and adjust so that the pictures coincide in the center of screen.

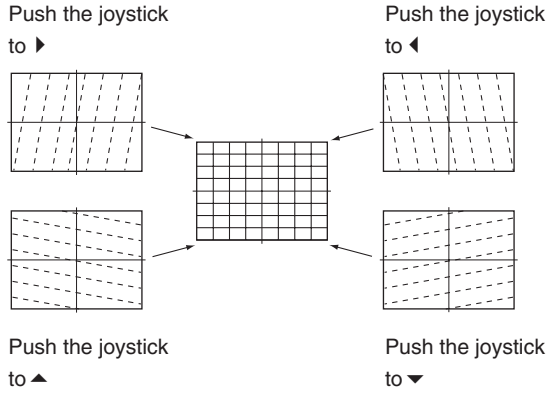
Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2170P-2 1 RGBS.

GRN CENT (Horizontally/Vertically)



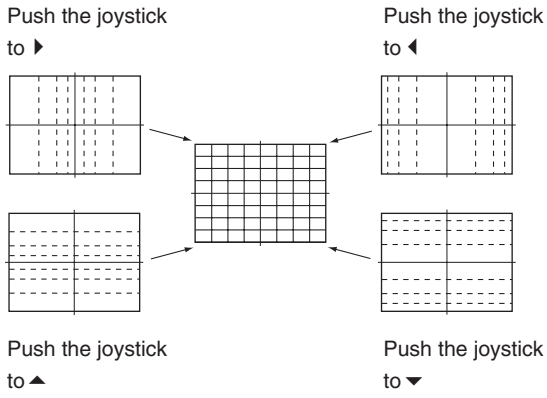
7. Select “GRN SKEW”, and correct the tilt of horizontal lines and vertical lines.

GRN SKEW (Horizontally/Vertically)



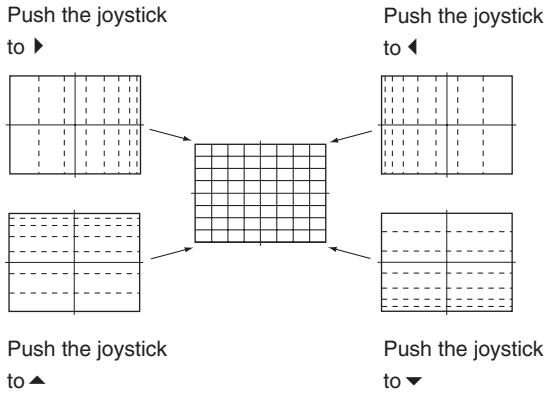
8. Select “GRN SIZE”, and adjust so that each distance from center to left end and to right end is equal. Adjust so that each distance from center to top and to bottom is equal.

GRN SIZE (Horizontally/Vertically)



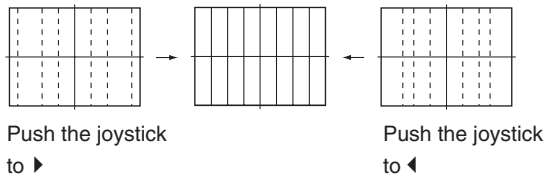
9. Select “GRN LIN”, and adjust so that each space at the right end and at the left end of screen is equal. Adjust so that each space at the top and at the bottom of screen is equal.

GRN LIN (Horizontally/Vertically)



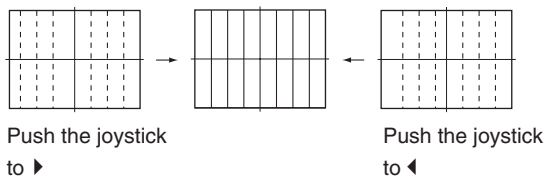
10. Select “GRN MSIZ”, and correct the space intervals for the horizontal section so the screen is equal.

GRN MSIZ (Horizontally)



11. Select “GRN MLIN”, and correct the sizes of the horizontal line so the center of the screen is symmetrical left and right.

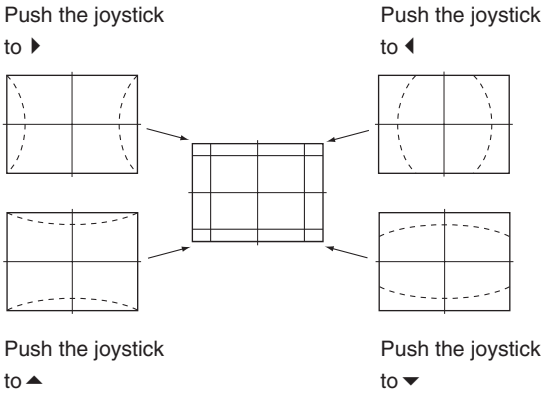
GRN MLIN (Horizontally)



Note: The SIZE and LIN, MSIZ and MLIN adjustments affect each other. If necessary, adjust these mutually.

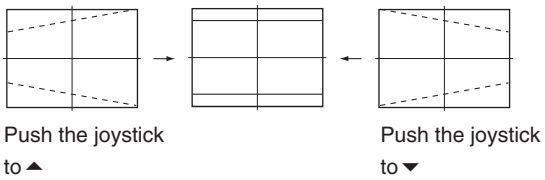
12. Select “GRN PIN”, and adjust so that right and left vertical lines on the screen become straight. Adjust so that upper and lower horizontal lines on the screen become straight.

GRN PIN (Horizontally/Vertically)



13. Select “GRN KEY”, and adjust so that upper and lower horizontal lines on the screen become parallel.

GRN KEY (Vertically)



Note: The VPIN and KEY adjustments affect each other.
If necessary, adjust these mutually.

14. Press the “9” button on the remote commander to enter fine adjustment mode.
15. Make the fine adjustment so that horizontal lines and vertical lines become straight.
16. Press the “9” button on the remote commander to return to coarse adjustment mode.

2) RED ADJUSTMENT

1. Cover the blue CRT lens with a lens caps to allow only the green and red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
2. Press the “3” button on the remote commander to select RED mode.
3. Adjust the following items so that red lines overlap with green lines.
   - RED CENT (horizontally/vertically)
   - RED SKEW (horizontally/vertically)
   - RED SIZE (horizontally/vertically)
   - RED LIN (horizontally/vertically)
   - RED MSIZ (horizontally)
   - RED MLIN (horizontally)
   - RED PIN (horizontally/vertically)
   - RED KEY (vertically)
4. Press the “9” button on the remote commander to enter fine adjustment mode.
5. Make the fine adjustment so that horizontal lines and vertical lines overlap with green lines.
6. Press the “9” button on the remote commander to return to coarse adjustment mode.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2170P-2 1 RGBS.

3) BLUE ADJUSTMENT

1. Remove the lens cap from the blue picture lens to display all colors.
2. Press the “3” button on the remote commander to select BLU mode.
3. Adjust the following items so that blue lines overlap with green lines.
   - BLU CENT (horizontally/vertically)
   - BLU SKEW (horizontally/vertically)
   - BLU SIZE (horizontally/vertically)
   - BLU LIN (horizontally/vertically)
   - BLU PIN (horizontally/vertically)
   - BLU KEY (vertically)
4. Press the “9” button on the remote commander to enter fine adjustment mode.
5. Make the fine adjustment so that horizontal lines and vertical lines overlap with green and red lines.
6. Press the “9” button on the remote commander to return `to coarse adjustment mode.

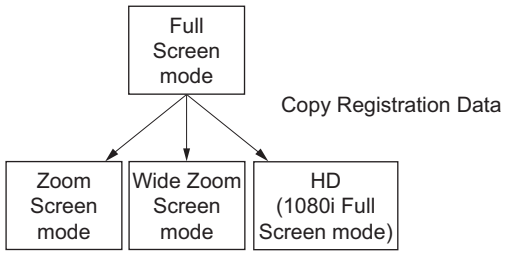
Note: When replacing CRTs, adjust the set-up adjustments (2-1 to 2-9) and the registration adjustment (2-12). When replacing multiple CRTs at the same time, replace and adjust them individually.

4) REGISTRATION DATA WRITING

1. After completing each adjustment of green, blue, and red for the NTSC Full mode press the “MUTING”+ “ENTER” buttons on the remote commander to write the registration data to the NVM.

2-13-2.COPYING ALL REGISTRATION DATA TO OTHER MODES

1. Make sure that the adjustment for NTSC Full mode are complete and the data have already been written.
2. Select the PJE mode.
3. Select ALCP and set the data to “01”, and press the “MUTING”+“ENTER” buttons on the remote commander.
4. The data from the NTSC Full mode is copied to all other modes.



5. Check in the other modes and adjust as demands.
   Be sure to write data in each mode.

2-14.AUTO REGISTRATION OFFSETS

IMPORTANT
This adjustment must be performed after registration adjustment or after readjustment for any reason!

Once registration in all modes is satisfactory:

1. Darken the room environment near the set.
2. Enter service mode and individually write data ("MUTING" + "ENTER") for:
   Full
   Zoom
   Wide Zoom
   1080i

Important:

You must complete step 2 even if registration looks OK in these modes and there were not any adjustments made.

Note: If 1080i source is not available, 1080i data can be displayed by entering Twin Mode.

3. Select input of RF (with a signal) or Video1 - Video4 (with a signal), and enter Full Mode.
   WARNING: DO NOT USE 1080i SIGNAL!
4. From service mode, select the PJE group.
5. To automatically store the offset values, press the "FLASH FOCUS" button on the front panel of the set.
   (The offset value is now stored)
   If FLASH FOCUS successfully calibrates, it displays "CALIBRATION OK."
   If FLASH FOCUS does not successfully calibrate, an error message is displayed.(Refer to section 2-15)
6. Exit the service mode.
7. If the calibration was successful, press the "FLASH FOCUS" button out of service mode.
8. Confirm registration is OK in all modes.

2-15.AUTO REGISTRATION ERROR CODES

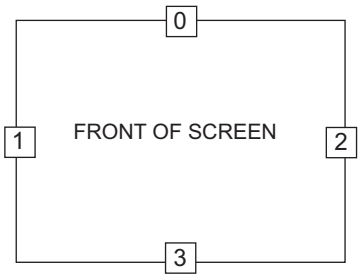
If an error code is displayed after the set has been correctly adjusted, check the following items: position, tilt and sizing. If any of these adjustments are off, even slightly, the auto-registration pattern will not hit the four sensors properly. This occurs when the internal generator patterns are being flashed on the screen for the sensors to read. Therefore, auto registration (called auto convergence) cannot operate properly, causing an error code to be displayed. In order for this function to operate properly, position, tilt and size must be adjusted properly.

ERROR CODE LIST

ERROR CODE	DESCRIPTION	NOTE
00	No Error	
10	Sensor 0 low output	Check sensor 0, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust 66 VUP, 70 HMID if necessary.
11	Sensor 1 low output	Check sensor 1, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust 69 HLE, 67 VMID if necessary.
12	Sensor 2 low output	Check sensor 2, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust 71 HRIV, 67 VMID if necessary.
13	Sensor 3 low output	Check sensor 3, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust 68 VLOW, 70 HMID if necessary.
20	Sensor 0 high output	Check sensor 0 and circuit.
21	Sensor 1 high output	Check sensor 1 and circuit.
22	Sensor 2 high output	Check sensor 2 and circuit.
23	Sensor 3 high output	Check sensor 3 and circuit.
30	V CENT or SKEW adjustment loop overflow	Check 67 VMID data and check registration condition.
31	H CENT or SKEW adjustment loop overflow	Check 70 HMID data and check registration condition.
32	H LIN or SIZE adjustment loop overflow	Check 69 HLE and 71 HRIV data and check registration condition.
40	V CENT regi data overflow	Check 67 VMID data and confirm V CENT data (all modes) is not near 511.
41	H CENT regi data overflow	Check 70 HMID data and confirm H CENT data (all modes) is not near 511.
42	V SKEW regi data overflow	Check 67 VMID data and confirm V SKEW data (all modes) is not near 511.
43	H SKEW regi data overflow	Check 70 HMID data and confirm H SKEW data (all modes) is not near 511.
44	H LIN regi data overflow	Check 69 HLE and 71 HRIV data and confirm H CENT data (all modes) is not near 511.
45	H SIZE regi data overflow	Check 69 HLE and 71 HRIV data and confirm H CENT data (all modes) is not near 511.
50	V CENT regi data overdrow	Check 67 VMID data and confirm V CENT data (all modes) is not near -512.
51	H CENT regi data overdrow	Check 70 HMID data and confirm H CENT data (all modes) is not near -512.
52	V SKEW regi data overdrow	Check 67 VMID data and confirm V SKEW data (all modes) is not near -512.
53	H SKEW regi data overdrow	Check 70 HMID data and confirm H SKEW data (all modes) is not near -512.
54	H LIN regi data overdrow	Check 69 HLE and 71 HRIV data and confirm H CENT data (all modes) is not near -512.
55	H SIZE regi data overdrow	Check 69 HLE and 71 HRIV data and confirm V CENT data (all modes) is not near -512.
60	CENT/SKEW calibration loop overflow	Check 70 HMID and 67 VMID data and check registration condition.
61	SIZE/LIN calibration loop overflow	Check 69 HLE, 71 HRIV, 66 VUP, and 68 VLOW data and check registration condition.
70	V CENT/SKEW ratio limit	Check sensors 1 and 2, connection/wiring, circuit, increase 65 RTLM.
71	H CENT/SKEW ratio limit	Check sensors 0 and 3, connection/wiring, circuit, increase 65 RTLM.
73	H SIZE/Lin ratio limit	Check sensors 1 and 2, connection/wiring, circuit, increase 65 RTLM.
80	SIZE Limit Error	Check that horizontal SIZE data is not near 64 SZLM.

* In the case of multiple errors, last error is displayed.

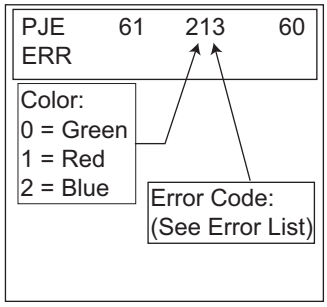
SENSOR POSITIONS



0: UPPER SENSOR
1: LEFT SENSOR
2: RIGHT SENSOR
3: LOWER SENSOR

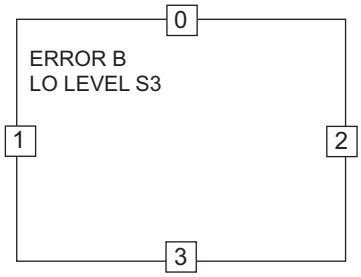
• ERROR CODE SCREEN DISPLAY

Error codes in normal (customer) mode are not displayed. You must enter PJE service mode to see the error code.



(Blue Sensor 3 Low Output)

In service mode, the error will be displayed in text format.



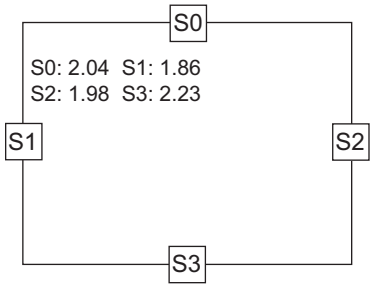
2-16.AUTO REGISTRATION DIAGNOSTICS

The TEST service item (PJE #72) can be used to determine if a sensor or sensor amplifier is working properly. It can also be used to check pattern positions.

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Color: 0=Green, 1=Red, 2=Blue, 3=All
CS/ZL: 0=None, 1=Cent/Skew, 2=siZe/Lin, 3=Both
Display/Loop: 0=Display, 1:Loop

DISPLAY/ LOOP	CS/ZL	COLOR	ACTION
(0)	0	0	Normal calibration (no diagnostics).
(0)	X	X	Performs one adjustment cycle, then displays average peak voltages for the specified CS/ZL and Color.
(0)	3	3	Does nothing (can't display more than one CS/ZL or Color at a time.)
1	X	X	Adjusts specified CS/ZL and Color until a key is pressed. Useful for measuring signals with oscilloscope.



Sensor 0 peak voltage = 2.04 V, etc.

SECTION 3: SAFETY-RELATED ADJUSTMENTS

D BOARD

3-1. HV REGULATION CIRCUIT CHECK AND ADJUSTMENT

When replacing the following components marked with a ◪ on the schematic diagram always check the HV regulation, and if necessary re-adjust.

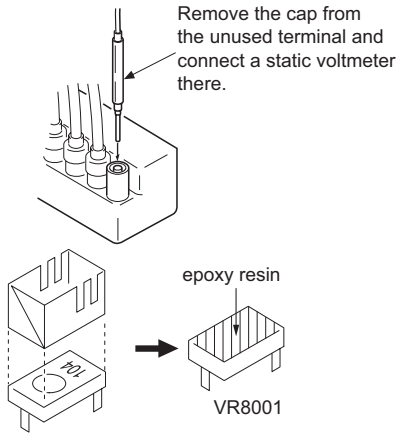
Part Replaced (◪)	Adjustment (⋈)
A BOARD: HV Block, T8005 (FBT), T8004 (LOT), R8129, D8038, R8128, C8129, R8223, R8102, R8230, R8055, R8153, C8083, R8139, C8079, D8051, D8013, R8140, D8043, R8163, C8090, D8015. R8142, R8131, Q8021, IC8006, D Board	**HV REGULATOR** VR8001

OPERATION CHECK

1. Receive the all white signal.
2. Set PIC MAX/BRT CENT.
3. Confirm that the voltage between CN8015 ① PIN and GND is less than 7.80VDC.

HV REGULATION ADJUSTMENT

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Repeat steps 1 and 2 as above.
4. Confirm that the static voltmeter reading is 31.0 ± 0.4V.
5. If not, adjust with VR8001 to the specified value.
6. After adjustment, put the VR cover on VR8001 (as shown below) and apply sufficient amount of epoxy resin around VR8001.



3-2. HV HOLD DOWN CIRCUIT OPERATION CHECK AND ADJUSTMENT

When replacing the following components marked with a ◪ on the schematic diagram always check the hold-down voltage and re-adjust when necessary.

Part Replaced (◪)	Adjustment (⋈)
A BOARD: HV Block, T8005 (FBT), T8004 (LOT), C8123, C8124, Q8043, Q8035, C8104, R8171, D8036, R8043, R8035, C8088, C8086, R8159, D8022, C8054, R8166, C8100, IC8008, D8019, D8020, R8201, C8118, D8028, R8196, FB8001, D Board	**HV HOLD DOWN** VR8002

OPERATION CHECK

1. Receive the dot signal.
2. Set PIC MIN/BRT MIN.
3. Confirm that the voltage between cathode of D8038 (JW171) and GND is more than 23.0V DC.
4. Using an external DC Power supply, apply the voltage shown below between cathode of D8038 (JW171) on “D” and GND, then confirm that the HV-Prot circuit works. (Raster disappears)

   Apply DC voltage: Less than 29.05V DC.

HV HOLD-DOWN ADJUSTMENT

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Connect an external 10kΩ VR at CN8015 and adjust this VR so that the high voltage is 34.50kV.
4. Adjust VR8002 to the point that the HV-Prot circuit works (Raster disappears) at 34.50 ± 0.50kV reading on the static voltmeter.
5. After adjustment, put the VR cover on VR8002 and apply sufficient amount of epoxy resin around VR8002 as the same manner for VR8001.

G BOARD

3-3. +B MAX VOLTAGE CONFIRMATION

The following adjustments should always be performed when replacing IC6503 R6518.

1. Supply 130VAC to variable autotransformer.
2. Receive dot signal pattern and set the PICTURE and BRIGHTNESS settings to their minimum.
3. Confirm the voltage of TP +B 135V is less than 137.0Vdc.
4. If step 3 is not satisfied, replace IC6503 and repeat steps 1-3.

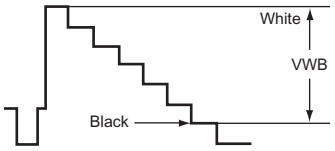
3-4. +B OVP CONFIRMATION

1. Add to low voltage power supply between to TP. 6502 and ground.
2. Supply 120VAC to variable autotransformer.
3. Power on the Set and receive dot signal pattern.
4. Set the PICTURE and BRIGHTNESS settings.
5. Check the OVP is activated.
   Operate :less than 2.50V

SECTION 4: CIRCUIT ADJUSTMENTS

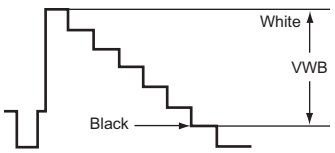
4-1. P &P SUB CONTRAST ADJUSTMENT (VIDEO) (SCON)

1. Receive the signal.
   VIDEO 1 terminal Composite: Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
   PICTURE : Maximum
   COLOR : Minimum
   2170P2 1 RGB : 2
3. Set to P & P mode, and receive the color bars in both main and sub (left and right), and set to service mode.
4. Connect an oscilloscope between the check point and ground.
   Check points : CN13 pin C20 (Main)
   : CN13 pin A19 (Sub)
5. Select “2103-1-02” (Main scon), and adjust so that the waveform level of VWB is 1.86 ± 0.03Vp-p.
6. Select “2103-2-02” (Sub scon), and adjust so that the waveform level of VWB is 1.86 ± 0.03Vp-p.
7. Write the data into memory.
   “MUTING” → “ENTER”



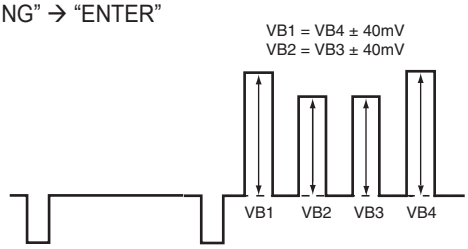
4-2. P & P SUB CONTRAST ADJUSTMENT (RF) (SCON)

1. Receive the signal.
   TV terminal RF : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
   PICTURE : Maximum
   COLOR : Minimum
   2170P2 1 RGB : 2
3. Set to P & P mode, and receive the color bars in both main and sub (left and right), and set to service mode.
4. Connect an oscilloscope between the check point and ground.
   Check points : CN13 pin C20 (Main)
   : CN13 pin A19 (Sub)
5. Select “2103-1-02” (Main scon), and adjust so that the waveform level of VWB is 1.86 ± 0.03Vp-p.
6. Select “2103-2-02” (Sub scon), and adjust so that the waveform level of VWB is 1.86 ± 0.03Vp-p.
7. Write the data into memory.
   “MUTING” → “ENTER”



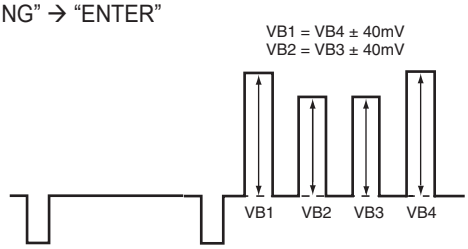
4-3. P & P SUB-HUE AND SUB-COLOR ADJUSTMENT VIDEO (SHUE, SCOL)

1. Receive the signal.
   VIDEO 1 terminal Composite: Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
   PICTURE : Maximum
   COLOR : Center
   RGB : 7
3. Set to P & P mode, and receive the color bars in both main and sub (left and right), set to service mode.
4. Connect an oscilloscope between pin ③ of CN702 (A board) connector and ground.
5. Select “2103-1-03 SCOL, -04 SHUE” (Main), and adjust them to have VB1 ≤ VB4 and VB2 ≤ VB3 in the waveform levels.
6. Select “2103-2-03 SCOL, -04 SHUE” (Sub), and adjust them to have VB1 ≤ VB4 and VB2 ≤ VB3 in the waveform levels.
7. Write the data into memory.
   “MUTING” → “ENTER”



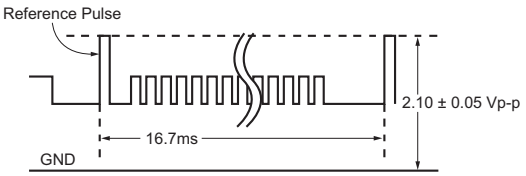
4-4. P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (RF) (SHUE, SCOL)

1. Receive the signal.
   TV terminal : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
   PICTURE : Maximum
   COLOR : Center
   RGB : 7
3. Set to P & P mode, and receive the color bars in both main and sub (left and right), set to service mode.
4. Connect an oscilloscope between pin ③ of CN702 (A board) connector and ground.
5. Select “2103-1-03 SCOL, -04 SHUE” (Main), and adjust them to have VB1 ≤ VB4 and VB2 ≤ VB3 in the waveform levels.
6. Select “2103-2-03 SCOL, -04 SHUE” (Sub), and adjust them to have VB1 ≤ VB4 and VB2 ≤ VB3 in the waveform levels.
7. Write the data into memory.
   “MUTING” → “ENTER”



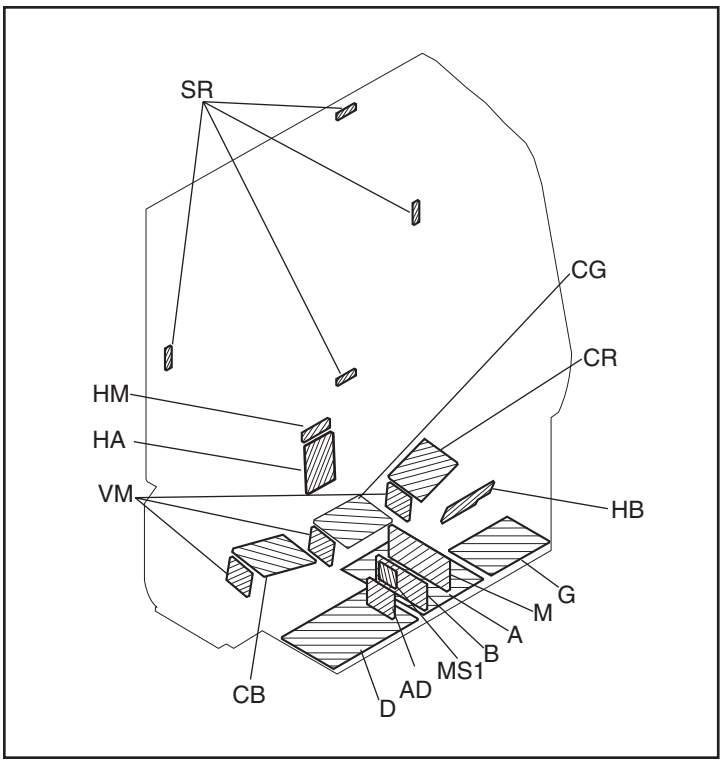
4-5. BLUE OFFSET ADJUSTMENT

1. Receive the all black (1080i, component) signal with VIDEO 5 input, and set PICTURE to maximum.
2. Connect an oscilloscope between CN507 ⑦ pin (B) on the (A board) and ground.
3. Set in the service mode and select the category “2170D-2”.
4. Adjust “3 SLIN” so that the waveform level is 2.10 ± 0.05Vpp.
5. After completing the adjustments, write the data into memory. “MUTING” → “ENTER”.
6. Receive the RF signal and change the wide screen mode to “Wide Zoom”. Copy the same data to “3 SLIN”.



SECTION 5: DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



5-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS INFORMATION

All capacitors are in µF unless otherwise noted. pF : µµF 50WV or less are not indicated except for electrolytics and tantalums.

All electrolytics are in 50V unless otherwise specified.

All resistors are in ohms. K=1000, M=1000k

Indication of resistance, which does not have one for rating electrical power, is as follows: Pitch : 5mm

Rating electrical power : $^1/_4$ W

$^1/_4$ W in resistance, $^1/_{10}$ W and $^1/_8$ W in chip resistance.

: nonflammable resistor.

: fusible resistor.

△ : internal component.

: panel designation and adjustment for repair.

⊥ : earth ground

⏚ : earth-chassis

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

Readings are taken with a NTSC color-bar signal input.

Readings are taken with a 10M digital multimeter.

Voltages are DC with respect to ground unless otherwise noted.

Voltage variations may be noted due to normal production tolerances.

All voltages are in V.

S : Measurement impossibillity.

▬▬: B+ line

▬ ▬: B-line. (Actual measured value may be different).

⇨: signal path. (RF)

Circled numbers are waveform references.

The components identified by ⋈ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be necessary, replace only with the value originally used.

When replacing components identified by ◪, make the necessary adjustments as indicated. If the results do not meet the specified value, change the component identified by ⋈ and repeat the adjustment until the specified value is achieved.

(Refer to adjustments in Sections 3-1 and 3-2.)

When replacing the parts listed in the table below, it is important to perform the related adjustments.

Part Replaced (◪)	Adjustment (⋈)
A BOARD: HV Block, T8005 (FBT), T8004 (LOT), R8129, D8038, R8128, C8129, R8223, R8102, R8230, R8055, R8153, C8083, R8139, C8079, D8051, D8013, R8140, D8043, R8163, C8090, D8015. R8142, R8131, Q8021, IC8006, D Board	**HV REGULATOR** VR8001
A BOARD: HV Block, T8005 (FBT), T8004 (LOT), C8123, C8124, Q8043, Q8035, C8104, R8171, D8036, R8043, R8035, C8088, C8086, R8159, D8022, C8054, R8166, C8100, IC8008, D8019, D8020, R8201, C8118, D8028, R8196, FB8001, D Board	**HV HOLD DOWN** VR8002

REFERENCE INFORMATION

RESISTOR	**: RN**	**METAL FILM**
	: RC	**SOLID**
	: FPRD	**NONFLAMMABLE CARBON**
	: FUSE	**NONFLAMMABLE FUSIBLE**
	: RW	**NONFLAMMABLE WIREWOUND**
	: RS	**NONFLAMMABLE METAL OXIDE**
	: RB	**NONFLAMMABLE CEMENT**
	: ※	**ADJUSTMENT RESISTOR**
COIL	**: LF-8L**	**MICRO INDUCTOR**
CAPACITOR	**: TA**	**TANTALUM**
	: PS	**STYROL**
	: PP	**POLYPROPYLENE**
	: PT	**MYLAR**
	: MPS	**METALIZED POLYESTER**
	: MPP	**METALIZED POLYPROPYLENE**
	: ALB	**BIPOLAR**
	: ALT	**HIGH TEMPERATURE**
	: ALR	**HIGH RIPPLE**

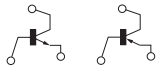
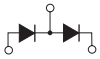
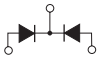
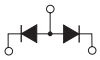
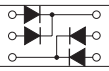
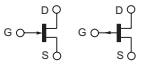
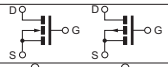
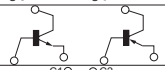
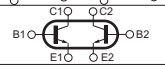
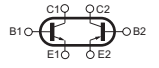
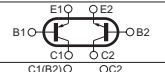
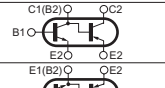
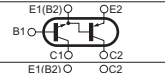
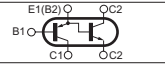
The components identified by shading and ⚠ symbol are critical for safety. Replace only with part number specified.

The symbol ▮ indicates a fast operating fuse and is displayed on the component side of the board. Replace only with fuse of the same rating as marked.

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Le symbole ▮ indique une fusible a action rapide. Doit etre remplace par une fusible de meme yaleur, comme maque.

Terminal name of semiconductors in silk screen printed circuit (*)

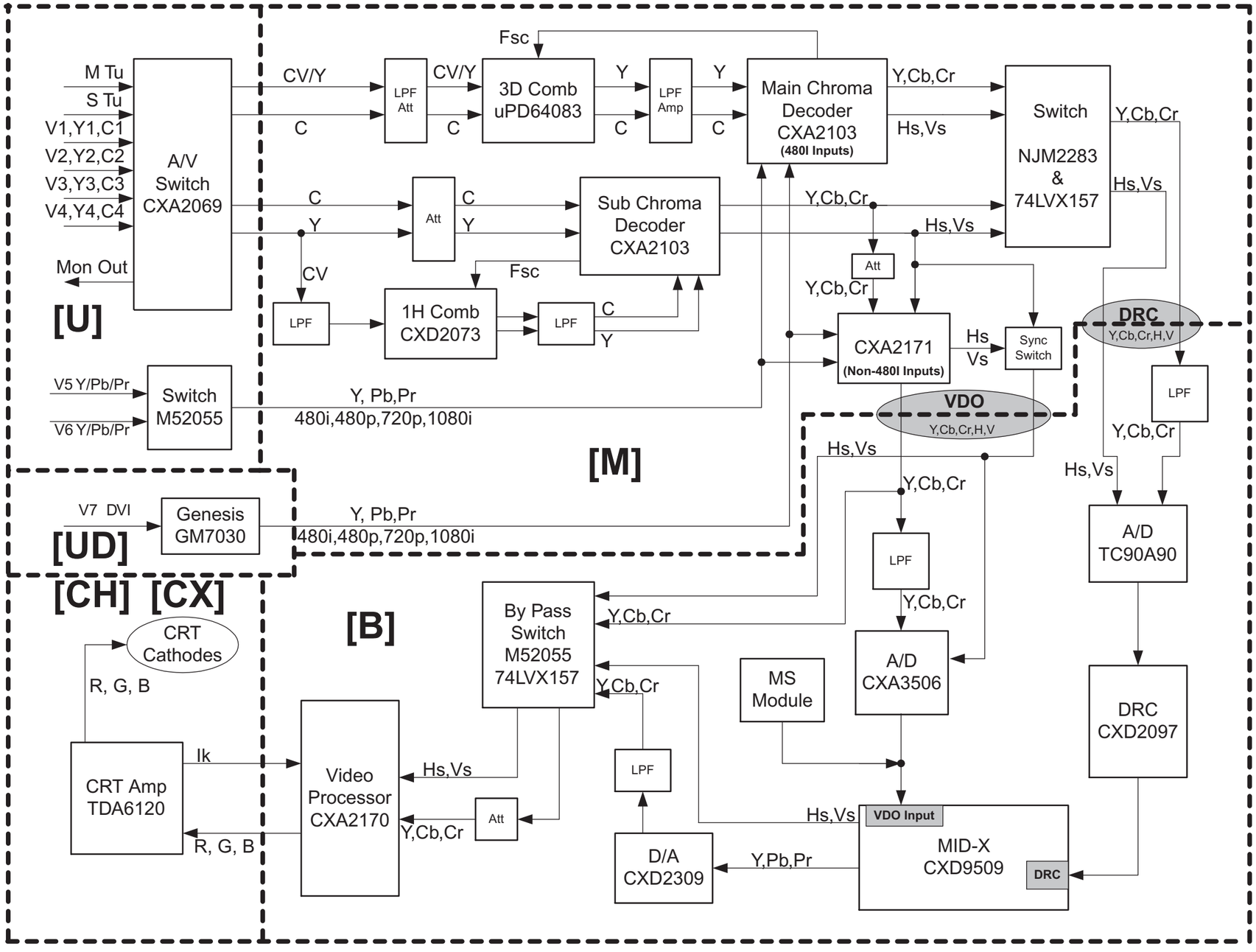
	Device	Printed symbol	Terminal name	Circuit
①	Transistor		Collector Base Emitter	
②	Transistor		Collector Base Emitter	
③	Diode		Cathode Anode	
④	Diode		Cathode Anode (NC)	
⑤	Diode		Cathode Anode (NC)	
⑥	Diode		Common Anode Cathode	
⑦	Diode		Common Anode Cathode	
⑧	Diode		Common Anode Anode	
⑨	Diode		Common Anode Anode	
⑩	Diode		Common Cathode Cathode	
⑪	Diode		Common Cathode Cathode	
⑫	Diode		Anode Cathode Anode Anode Cathode Anode	
⑬	Transistor (FET)		Drain Source Gate	
⑭	Transistor (FET)		Drain Source Gate	
⑮	Transistor (FET)		☐ Source ☐ Drain ☐ Gate	
⑯	Transistor		☐ Emitter ☐ Collector ☐ Base	
⑰	Transistor		C2 B1 E1 E2 B2 C1	
⑱	Transistor		C1 B2 E2 E1 B1 C2	
⑲	Transistor		C1 B2 E2 E1 B1 C2	
⑳	Transistor		C1 B2 E2 E1 B1 C2	
㉑	Transistor		E2 B1 E1 C2 C1(B2)	
㉒	Transistor		(B2) B1 E1 E2 C1 C2	
㉓	Transistor		(B2) E2 E1 B1 C2 C1	
-	Discrete semiconductor			

(Chip semiconductors that are not actually used are included.)

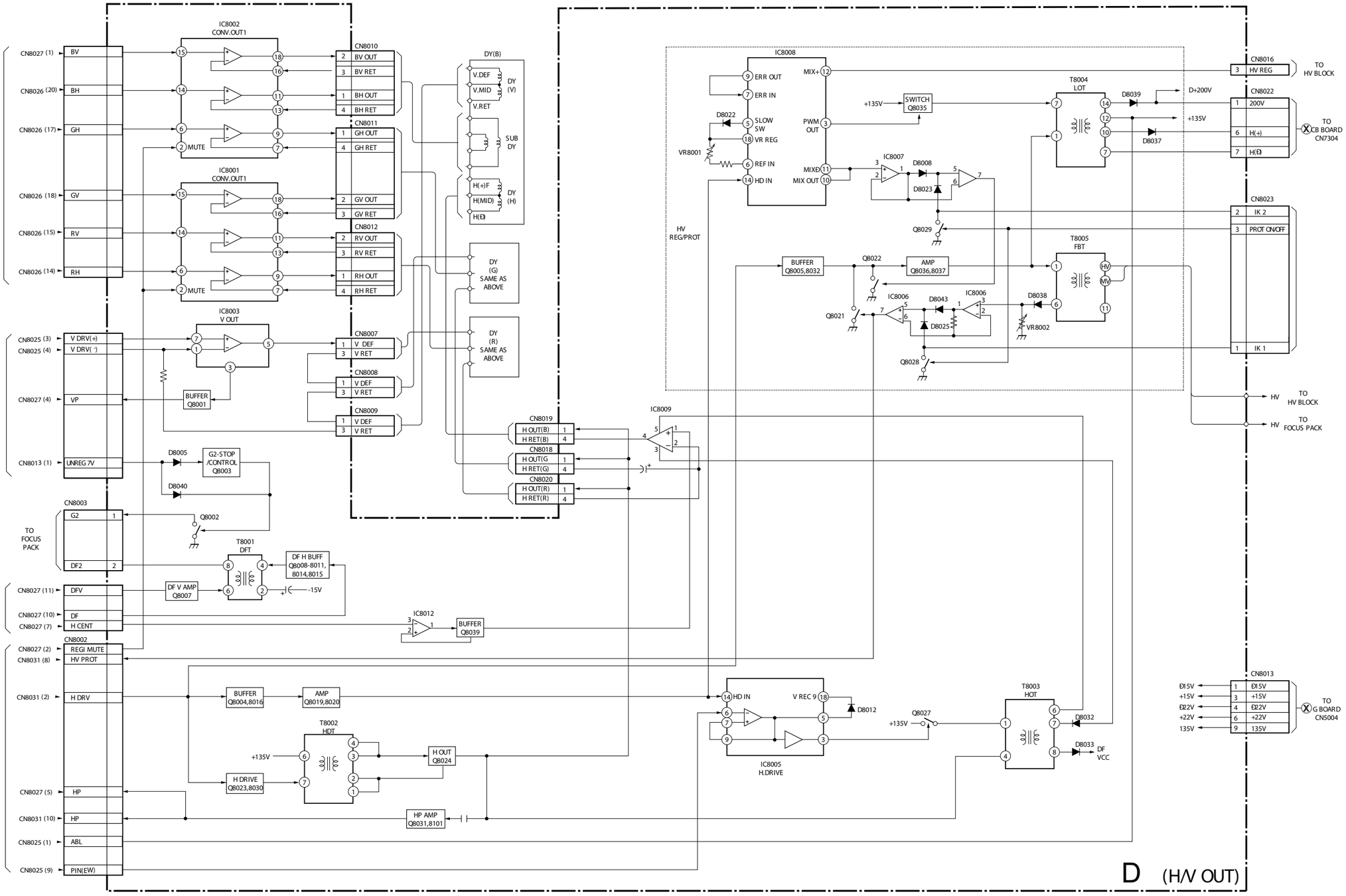
Ver.1.6

5-3. BLOCK DIAGRAMS

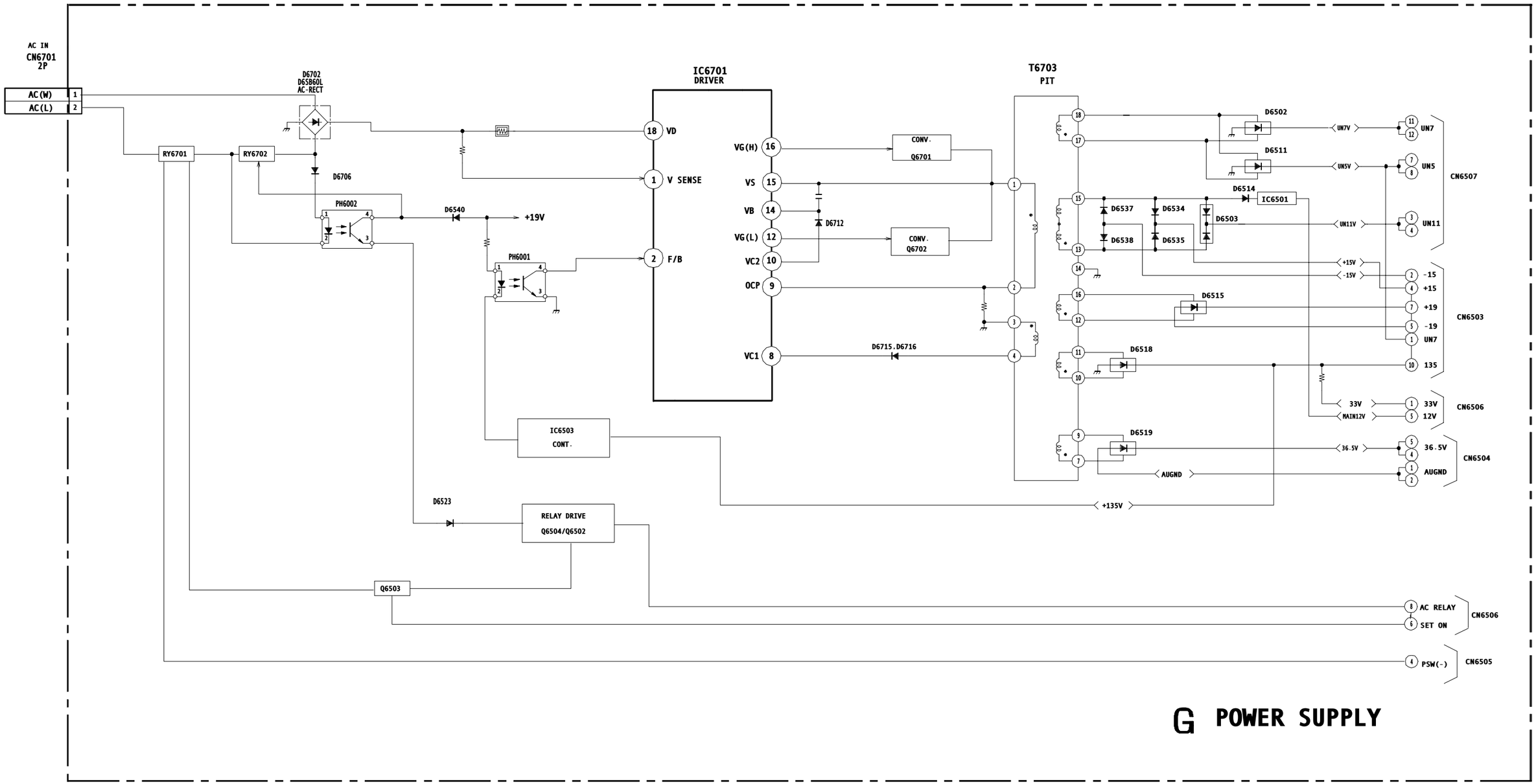
SIGNAL FLOW BLOCK DIAGRAM



DEFLECTION BLOCK DIAGRAM

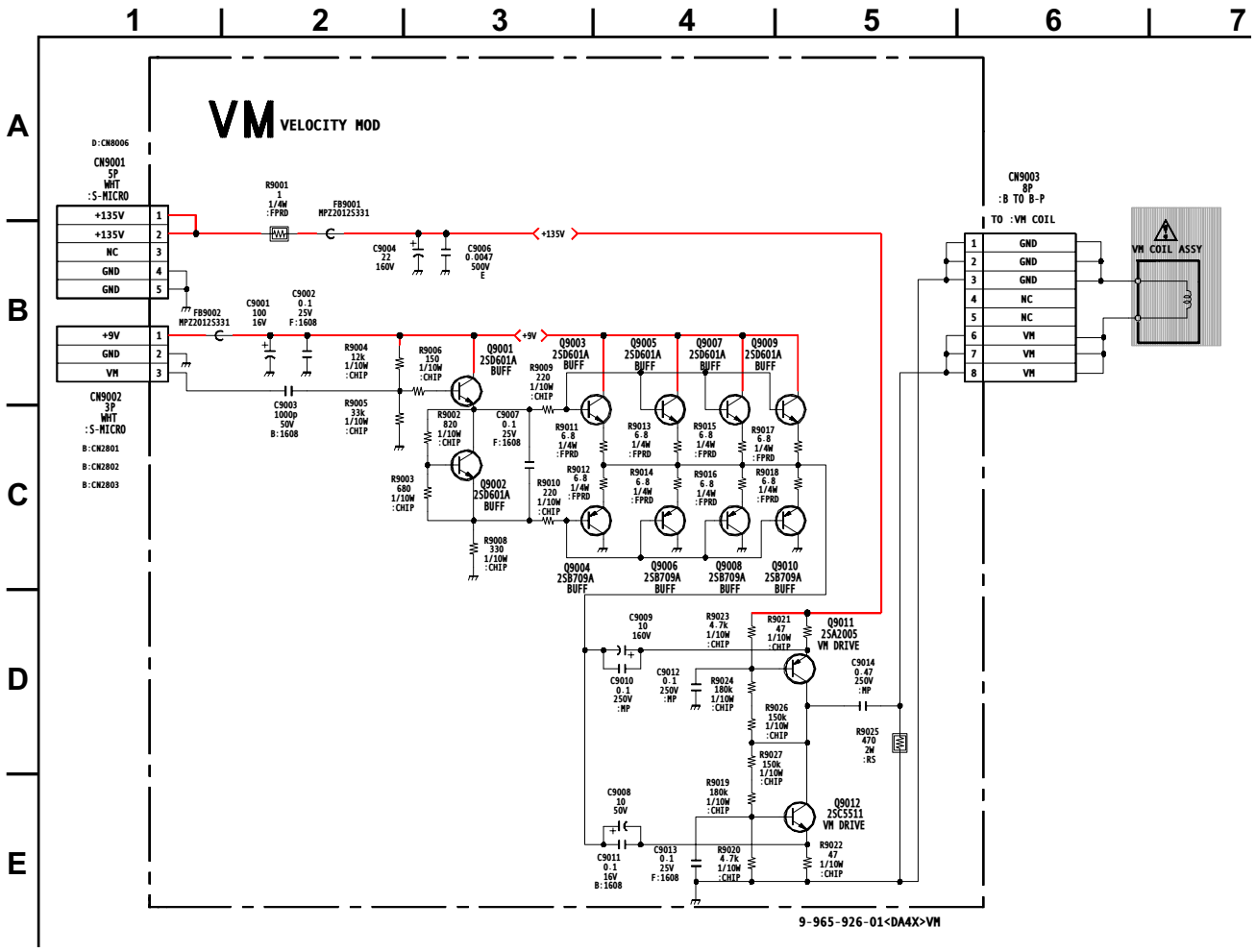


POWER SUPPLY BLOCK DIAGRAM



5-4. SCHEMATICS AND SUPPORTING INFORMATION

VM BOARD SCHEMATIC DIAGRAM



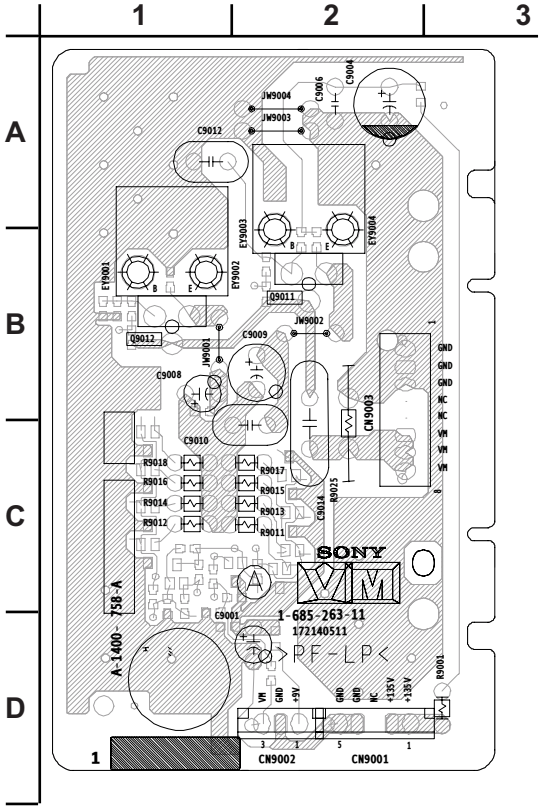
VM BOARD TRANSISTOR TABLE

	B	C	E
Q9001	0.0	9.0	5.2
Q9002	3.6	GND	4.3
Q9003	5.1	9.0	4.5
Q9004	3.6	GND	4.3
Q9005	5.1	9.0	4.5
Q9006	3.6	GND	4.3
Q9007	5.1	9.0	4.5
Q9008	3.6	GND	4.3
Q9009	5.1	9.0	4.5
Q9010	0.8	66.7	0.2
Q9011	133.8	66.7	134.3
Q9012	0.3	66.7	0.1

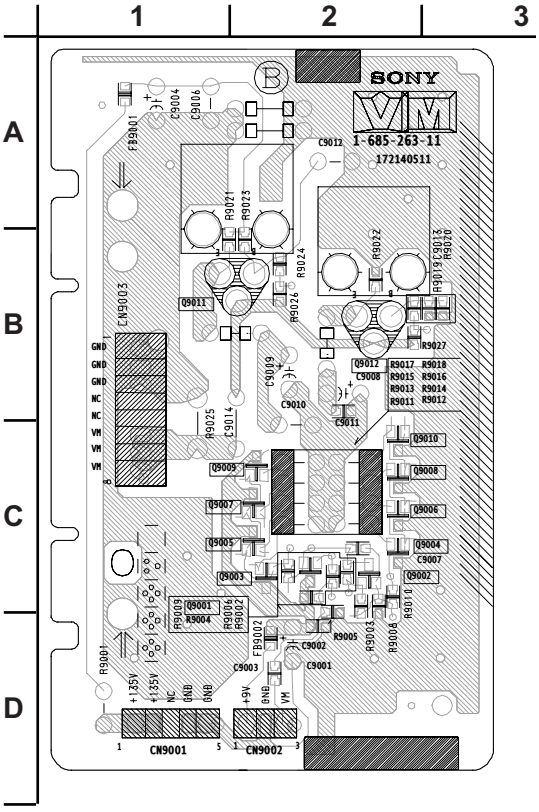
All voltages are in V.

VM [VELOCITY MOD]

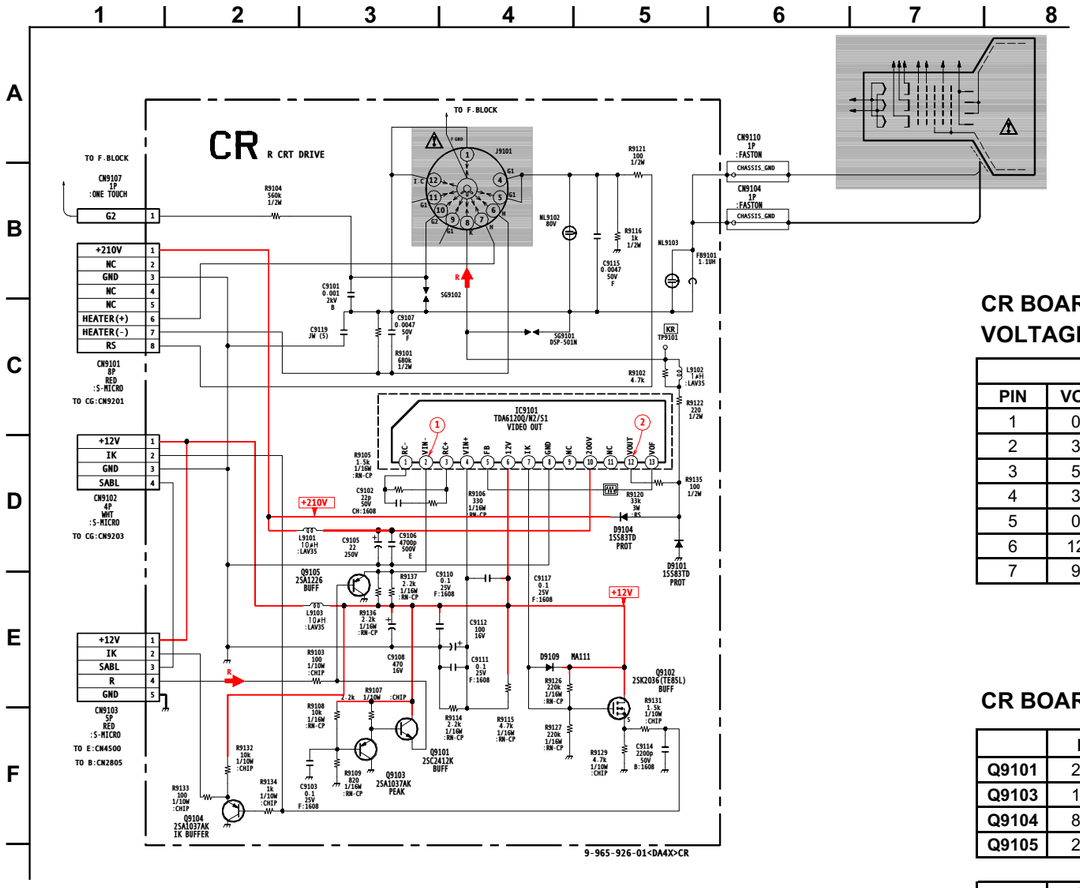
COMPONENT SIDE



CONDUCTOR SIDE



CR BOARD SCHEMATIC DIAGRAM



CR BOARD IC VOLTAGE TABLE

IC9101			
PIN	VOLT	PIN	VOLT
1	0.0	8	GND
2	3.5	9	N/C
3	5.0	10	200.0
4	3.5	11	N/C
5	0.0	12	144.4
6	12.0	13	2.2
7	9.4	All voltages are in V.	

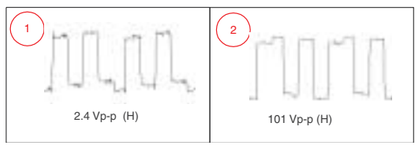
CR BOARD TRANSISTOR TABLE

	B	C	E
Q9101	2.2	12.0	2.7
Q9103	1.6	GND	2.2
Q9104	8.4	GND	8.5
Q9105	2.8	GND	3.7

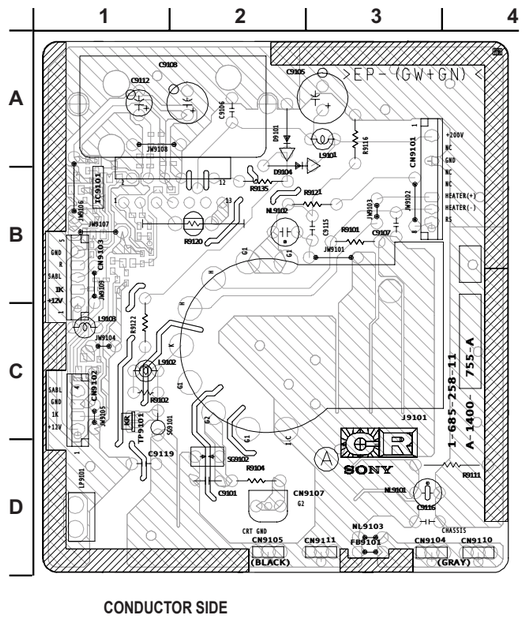
	D	G	S
Q9102	12.0	8.3	8.9

All voltages are in V.

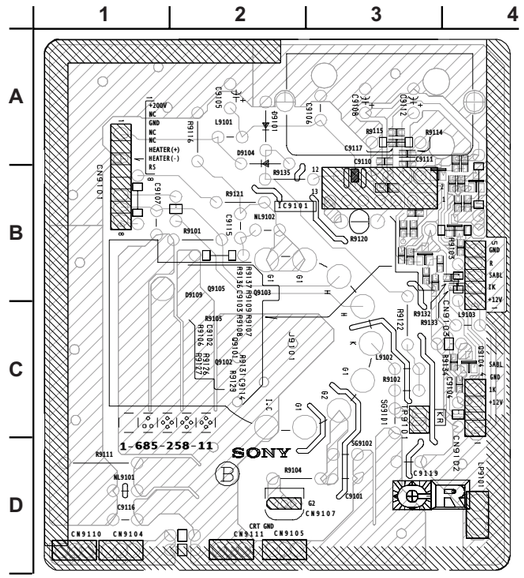
CR BOARD WAVEFORMS



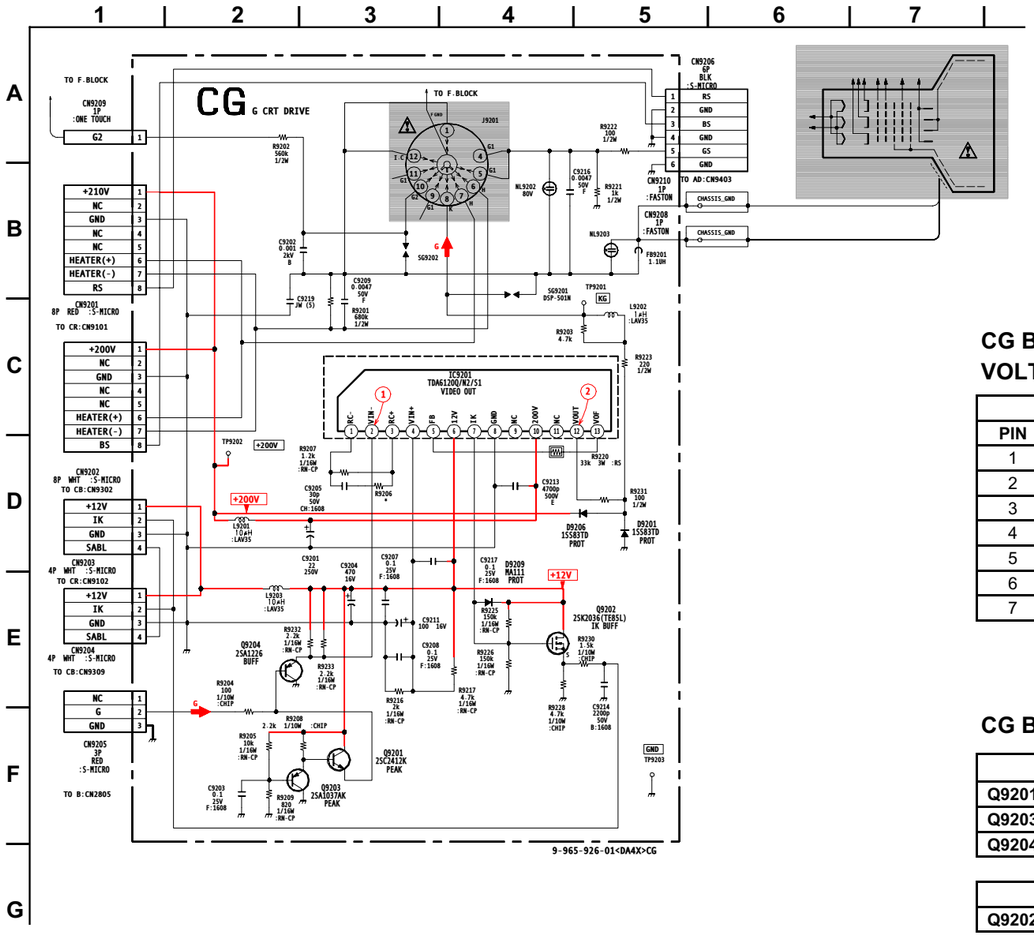
CR [R CRT DRIVE]
COMPONENT SIDE



CONDUCTOR SIDE



CG BOARD SCHEMATIC DIAGRAM



CG BOARD IC VOLTAGE TABLE

IC9201			
PIN	VOLT	PIN	VOLT
1	0.0	8	GND
2	3.5	9	N/C
3	5.0	10	200.0
4	3.5	11	N/C
5	0.0	12	144.4
6	12.0	13	2.2
7	9.4	All voltages are in V.	

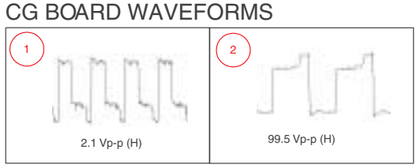
CG BOARD TRANSISTOR TABLE

	B	C	E
Q9201	2.2	12.0	2.7
Q9203	1.6	GND	2.2
Q9204	2.8	GND	3.7

	D	G	S
Q9202	12.0	8.7	9.3

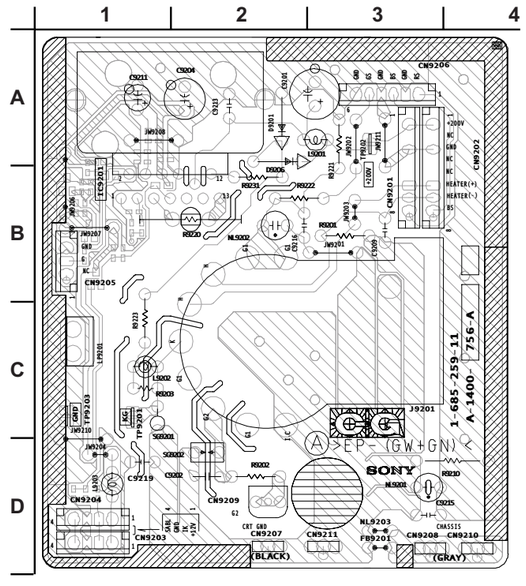
All voltages are in V.

CG BOARD WAVEFORMS

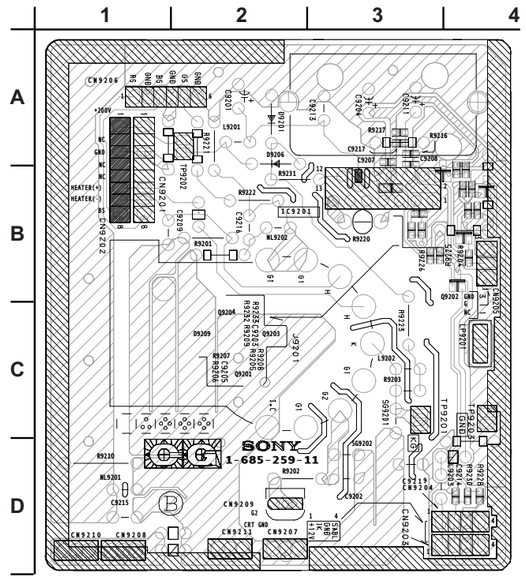


CG [G CRT DRIVE]

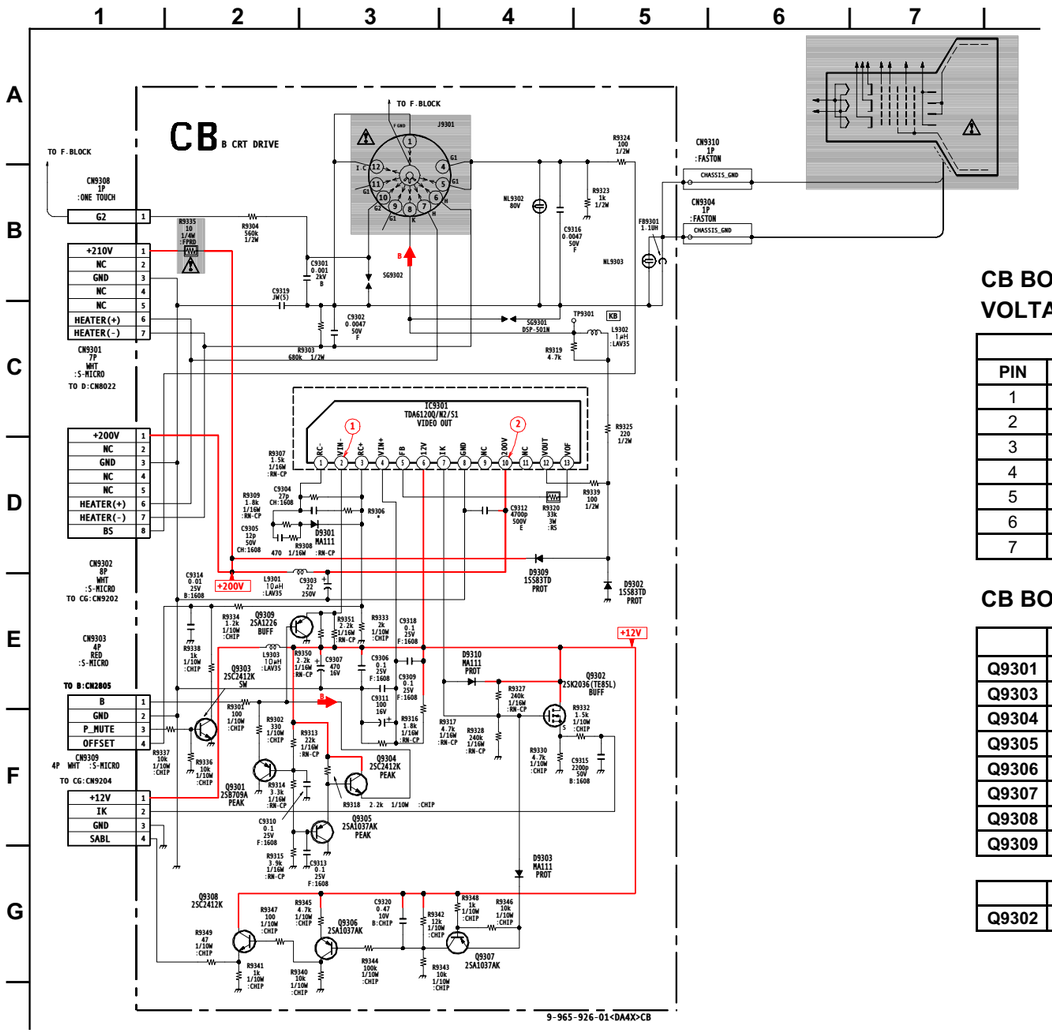
COMPONENT SIDE



CONDUCTOR SIDE



CB BOARD SCHEMATIC DIAGRAM



CB BOARD IC VOLTAGE TABLE

IC9301			
PIN	VOLT	PIN	VOLT
1	0.0	8	GND
2	3.5	9	N/C
3	5.0	10	200.0
4	3.5	11	N/C
5	0.0	12	144.4
6	12.0	13	2.2
7	9.4	All voltages are in V.	

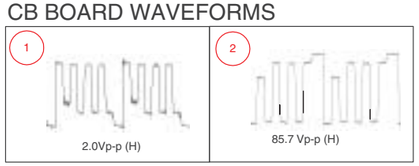
CB BOARD TRANSISTOR TABLE

	B	C	E
Q9301	3.9	GND	2.7
Q9303	0.0	0.0	GND
Q9304	2.3	12.0	2.7
Q9305	1.7	GND	2.3
Q9306	7.3	7.7	7.8
Q9307	11.7	5.4	11.8
Q9308	7.7	11.7	7.0
Q9309	2.8	GND	3.7

	D	G	S
Q9302	12.0	8.5	9.2

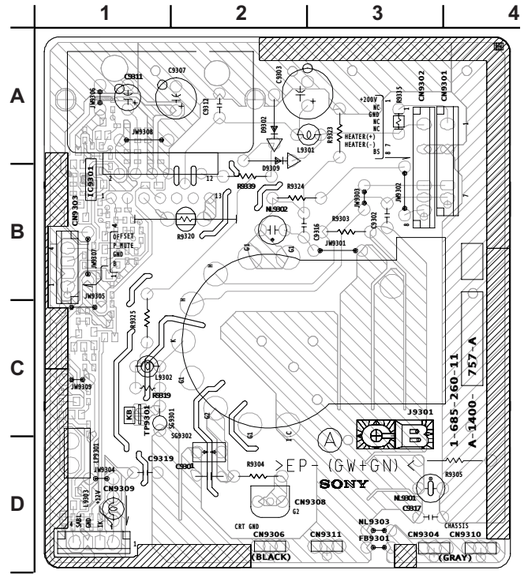
All voltages are in V.

CB BOARD WAVEFORMS

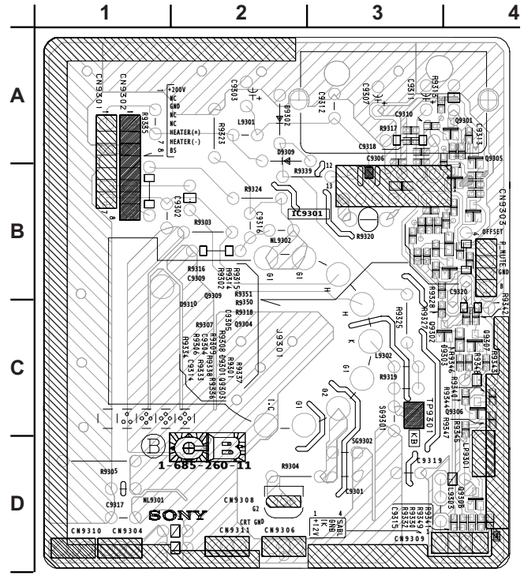


CB [B CRT DRIVE]

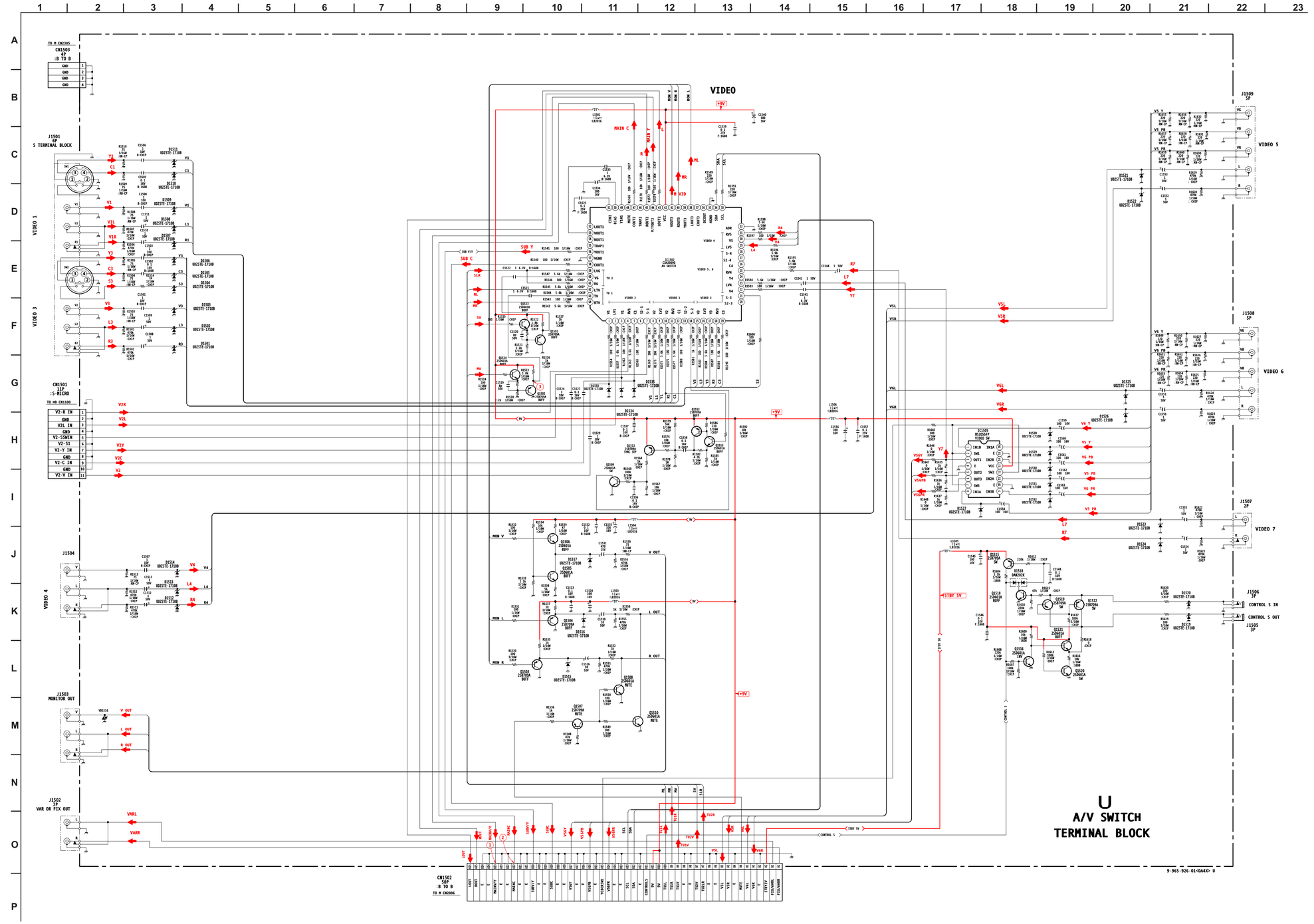
COMPONENT SIDE



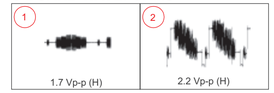
CONDUCTOR SIDE



U BOARD SCHEMATIC DIAGRAM



U BOARD WAVEFORMS



U BOARD IC VOLTAGE LIST

IC1502		21	4.9	43	4.5	IC1505	
PIN	VOLT	22	3.9	44	4.3	PIN	VOLT
1	3.9	23	4.5	45	4.5	1	4.7
2	4.5	24	N/C	46	N/C	2	0.0
3	3.9	25	4.5	47	4.4	3	3.2
4	4.5	26	N/C	48	N/C	4	GND
5	4.5	27	N/C	49	4.9	5	3.2
6	N/C	28	N/C	50	4.5	6	3.2
7	4.9	29	4.5	51	4.5	7	0.0
8	4.3	30	3.9	52	N/C	8	4.6
9	4.5	31	4.5	53	4.4	9	4.6
10	3.9	32	GND	54	N/C	10	GND
11	4.5	33	4.6	55	N/C	11	4.7
12	4.5	34	4.6	56	4.1	12	0.0
13	N/C	35	GND	57	GND	13	9.0
14	4.9	36	N/C	58	4.4	14	4.7
15	3.9	37	N/C	59	4.5	15	GND
16	4.5	38	4.5	60	5.0	16	4.7
17	3.9	39	N/C	61	4.5	All voltages are in V.	
18	4.5	40	4.5	62	4.5		
19	4.5	41	4.4	63	4.9		
20	N/C	42	9.0	64	4.5		

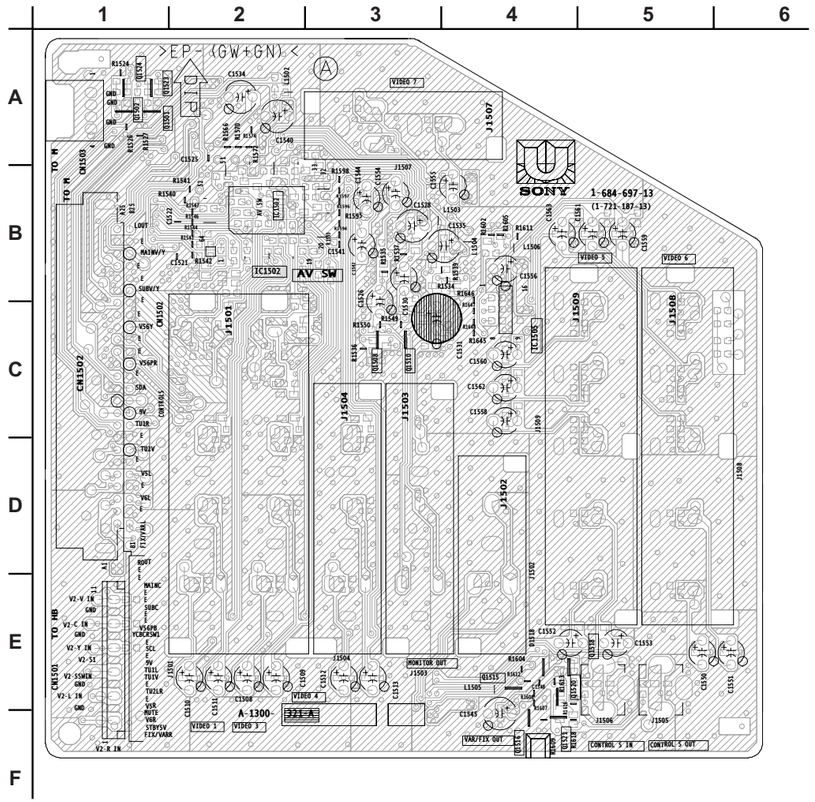
U BOARD TRANSISTOR TABLE

	B	C	E
Q1501	2.0	GND	2.7
Q1502	3.3	GND	4.0
Q1503	4.5	GND	5.2
Q1504	4.5	GND	5.2
Q1505	1.6	3.7	0.9
Q1506	4.4	8.3	3.8
Q1507	0.0	0.0	0.0
Q1508	0.0	0.0	GND
Q1509	0.0	4.9	GND
Q1510	0.0	0.0	GND
Q1511	8.5	0.0	9.0
Q1512	8.4	5.3	9.0
Q1513	3.8	8.4	3.2
Q1515	4.9	4.2	5.0
Q1516	0.6	0.1	GND
Q1518	0.0	4.9	GND
Q1519	5.0	0.0	0.0
Q1520	0.6	0.0	GND
Q1521	0.1	5.0	0.0
Q1522	5.0	0.0	0.0
Q1523	4.5	9.0	3.9
Q1524	6.5	9.0	3.9

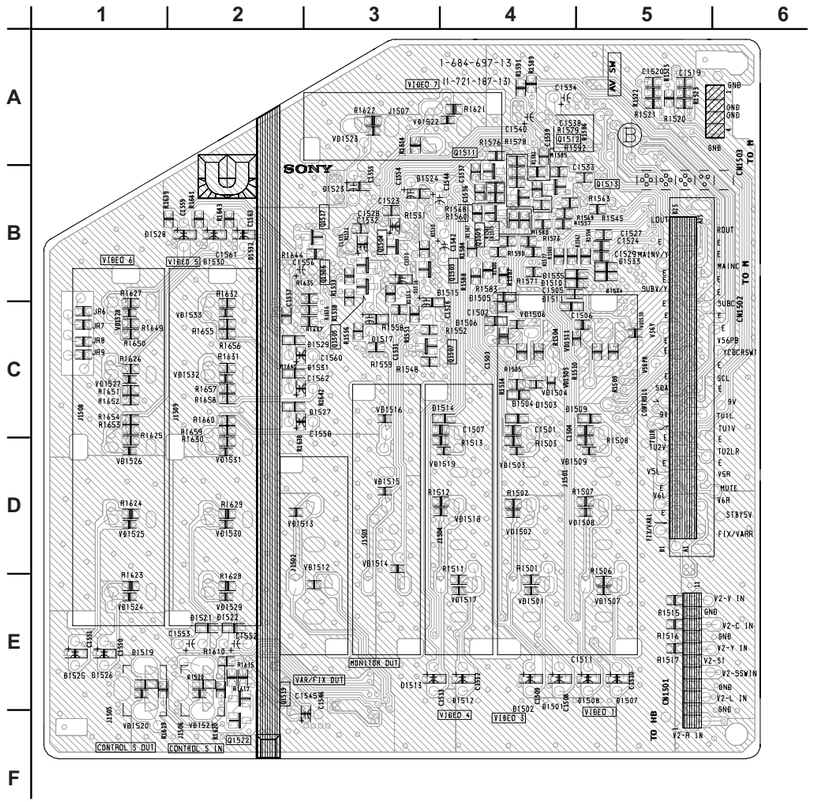
All voltages are in V.

U [AV SWITCH, TERMINAL BLOCK]

[COMPONENT SIDE]



[CONDUCTOR SIDE]

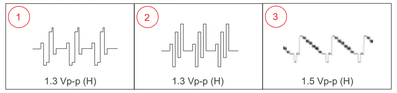


UD BOARD SCHEMATIC DIAGRAM

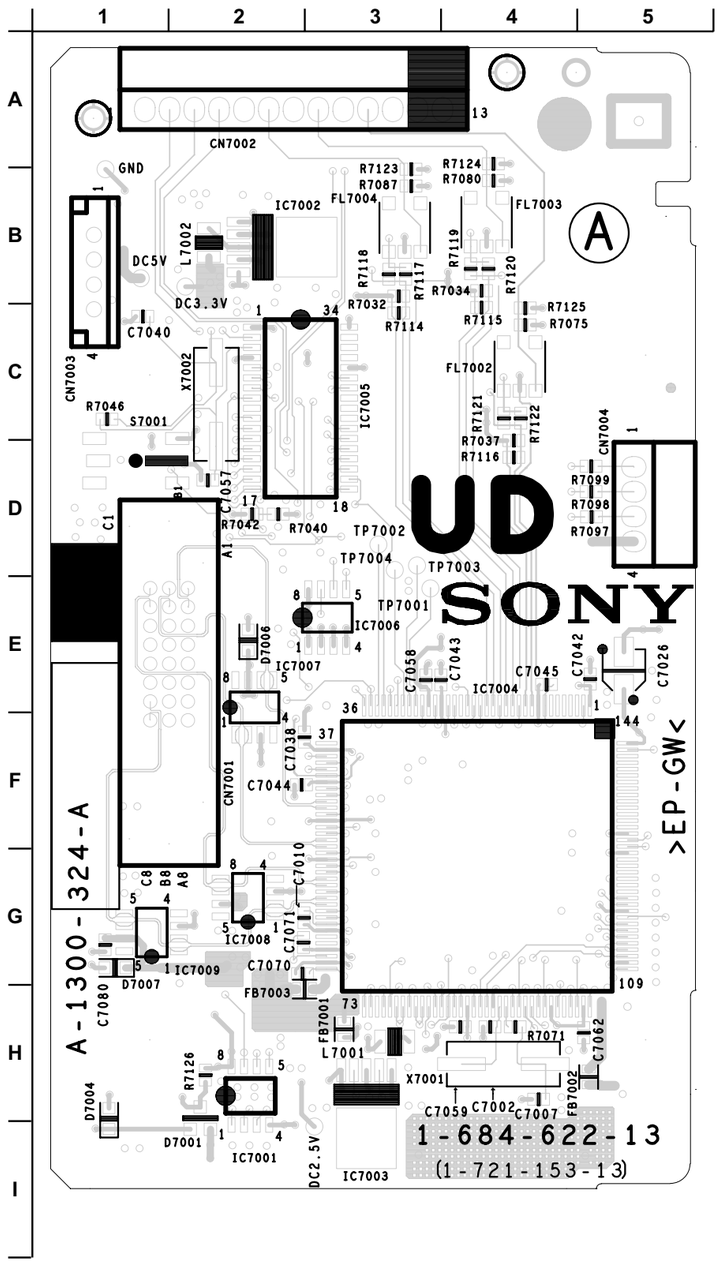
The UD board is not field repairable. If service is required, use the following part number to order a complete replacement board.

A-1300-324-A UD Board, Complete

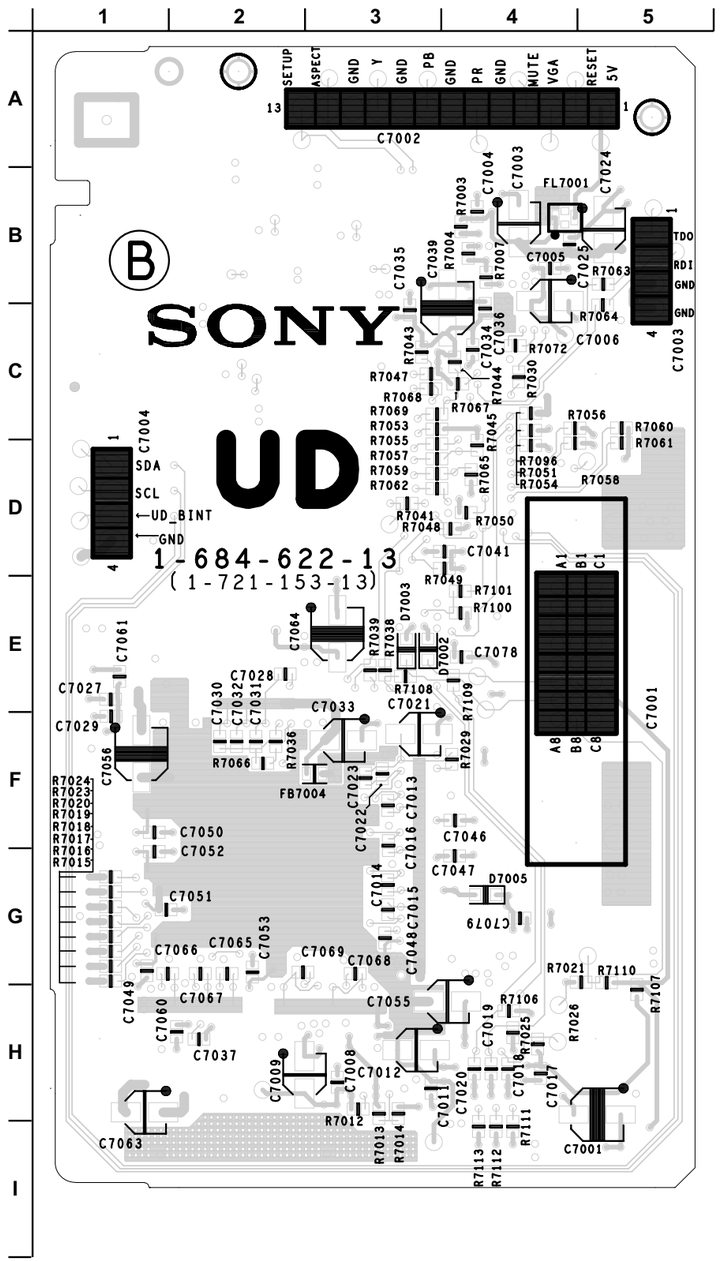
UD BOARD WAVEFORMS



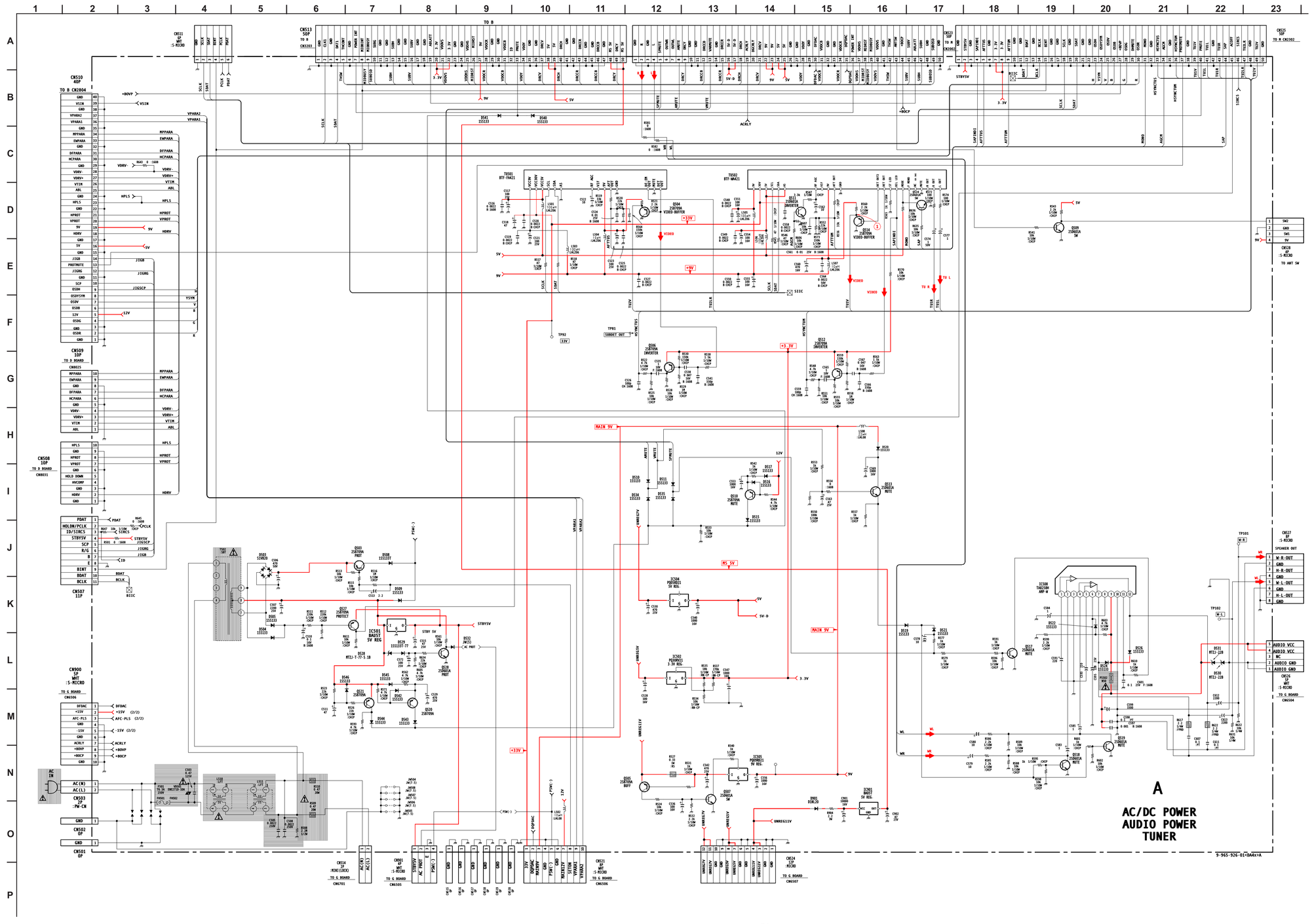
UD [DVI DECODER] [COMPONENT SIDE]



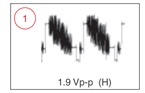
[CONDUCTOR SIDE]



A BOARD SCHEMATIC DIAGRAM



A BOARD WAVEFORMS



A BOARD IC VOLTAGE LIST

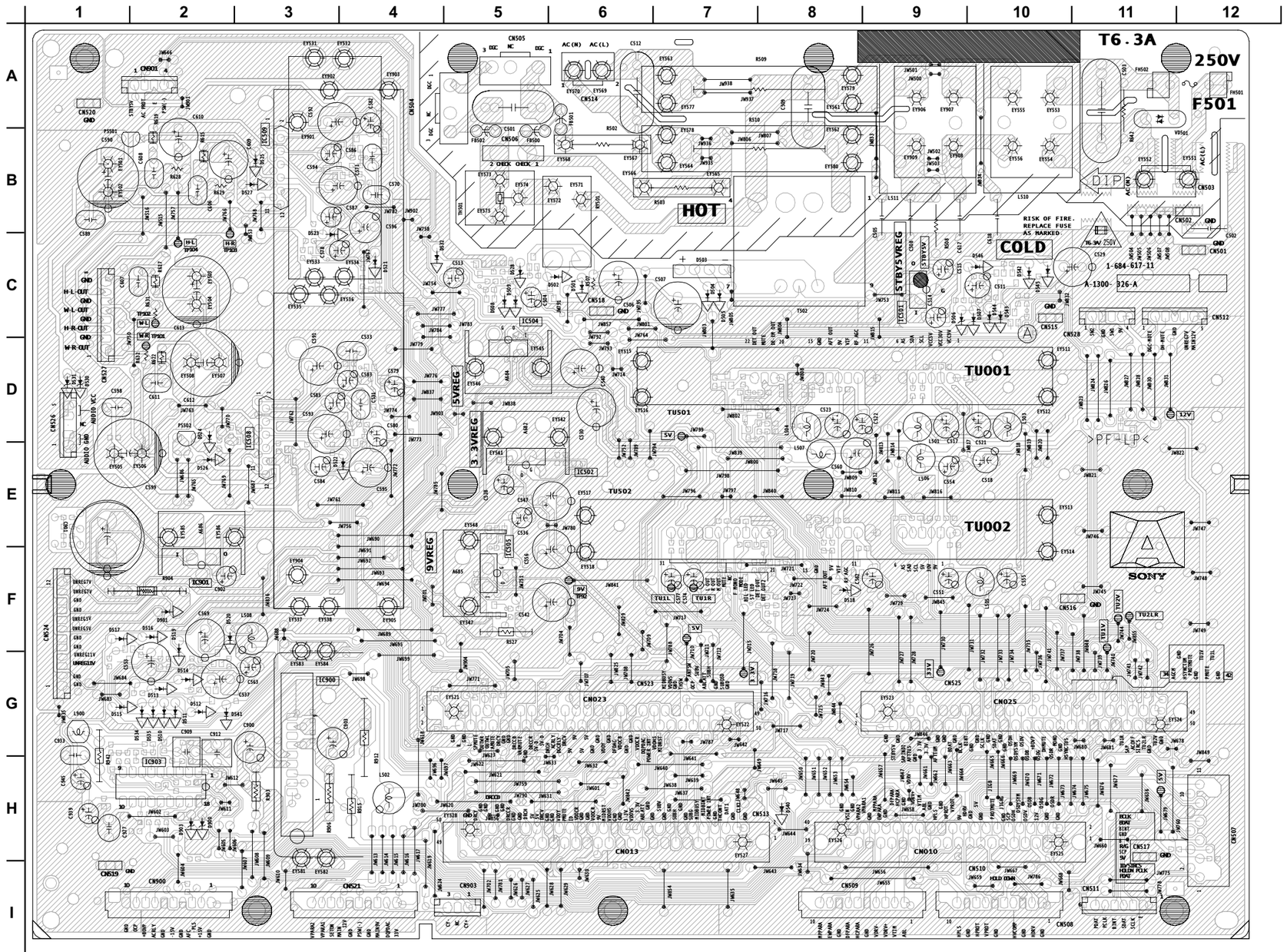
IC501		IC508	
PIN	VOLT	PIN	VOLT
1	9.7	1	1.6
O	5.0	2	0.1
GND	GND	3	GND
IC502		4	0.1
PIN	VOLT	5	1.6
I	5.0	6	7.9
O	3.3	7	11.0
GND	GND	8	5.1
4	3.4	9	24.0
IC504		10	0.0
PIN	VOLT	11	4.4
I	7.0	12	10.6
O	5.0	**IC901**	
GND	GND	PIN	VOLT
4	N/C	I	11.0
IC505		O	5.0
PIN	VOLT	GND	GND
I	11.0	All voltages are in V.	
O	9.0		
GND	GND		
4	2.3		

A BOARD TRANSISTOR VOLTAGE LIST

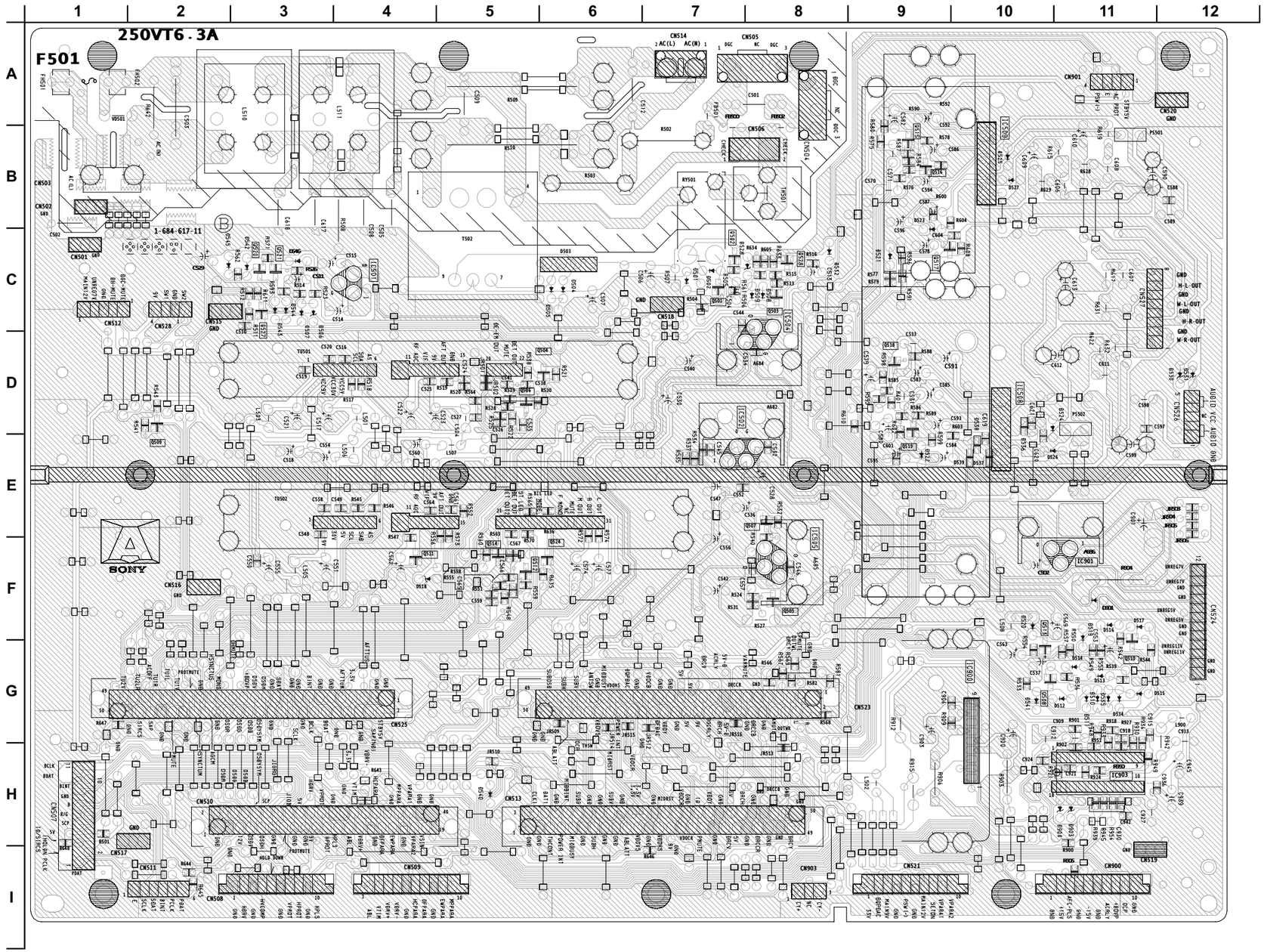
	B	C	E
Q503	21.2	0.2	21.3
Q504	3.9	GND	4.5
Q505	10.0	0.1	11.0
Q506	3.5	0.5	3.3
Q507	0.1	2.3	GND
Q509	0.7	0.1	GND
Q510	12.0	0.0	12.0
Q511	0.1	7.5	GND
Q512	3.3	0.5	3.3
Q513	0.0	9.0	0.0
Q514	5.9	GND	6.5
Q517	0.0	4.4	GND
Q518	0.0	0.0	GND
Q519	0.0	0.0	GND
Q520	9.7	0.0	9.7
Q521	9.7	0.0	9.7
Q524	0.7	0.1	GND
Q527	9.8	0.0	5.0
Q528	0.7	0.0	GND

All voltages are in V.

A [AC/DC POWER, AUDIO POWER, TUNER] [COMPONENT SIDE]



A [AC/DC POWER, AUDIO POWER, TUNER] [CONDUCTOR SIDE]



A BOARD LOCATOR LIST			
IC		DIODE	
IC501	C-4	D503	C-6
IC502	D-8	D504	C-6
IC504	C-8	D505	C-6
IC505	E-8	D508	C-8
IC508	D-10	D509	C-8
IC901	F-11	D510	G-11
TRANSISTOR		D511	G-11
Q503	C-8	D515	G-11
Q504	D-6	D516	F-11
Q505	F-8	D517	F-11
Q506	D-5	D519	F-11
Q507	E-8	D520	F-10
Q509	E-2	D521	C-9
Q510	G-11	D522	E-9
Q511	F-4	D524	D-11
Q512	F-6	D526	E-11
Q513	F-10	D528	C-7
Q514	F-5	D529	C-7
Q517	C-9	D530	D-12
Q518	D-9	D531	D-12
Q519	E-9	D534	G-11
Q520	C-3	D535	G-11
Q521	C-3	D540	H-5
Q524	F-6	D541	G-10
Q527	C-3	D542	C-3
Q528	C-8	D543	C-3
		D544	C-3
		D545	C-3
		D546	C-3
		D901	F-11

B BOARD SCHEMATIC DIAGRAM (1 OF 6) The B board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1300-407-A B Board, Complete

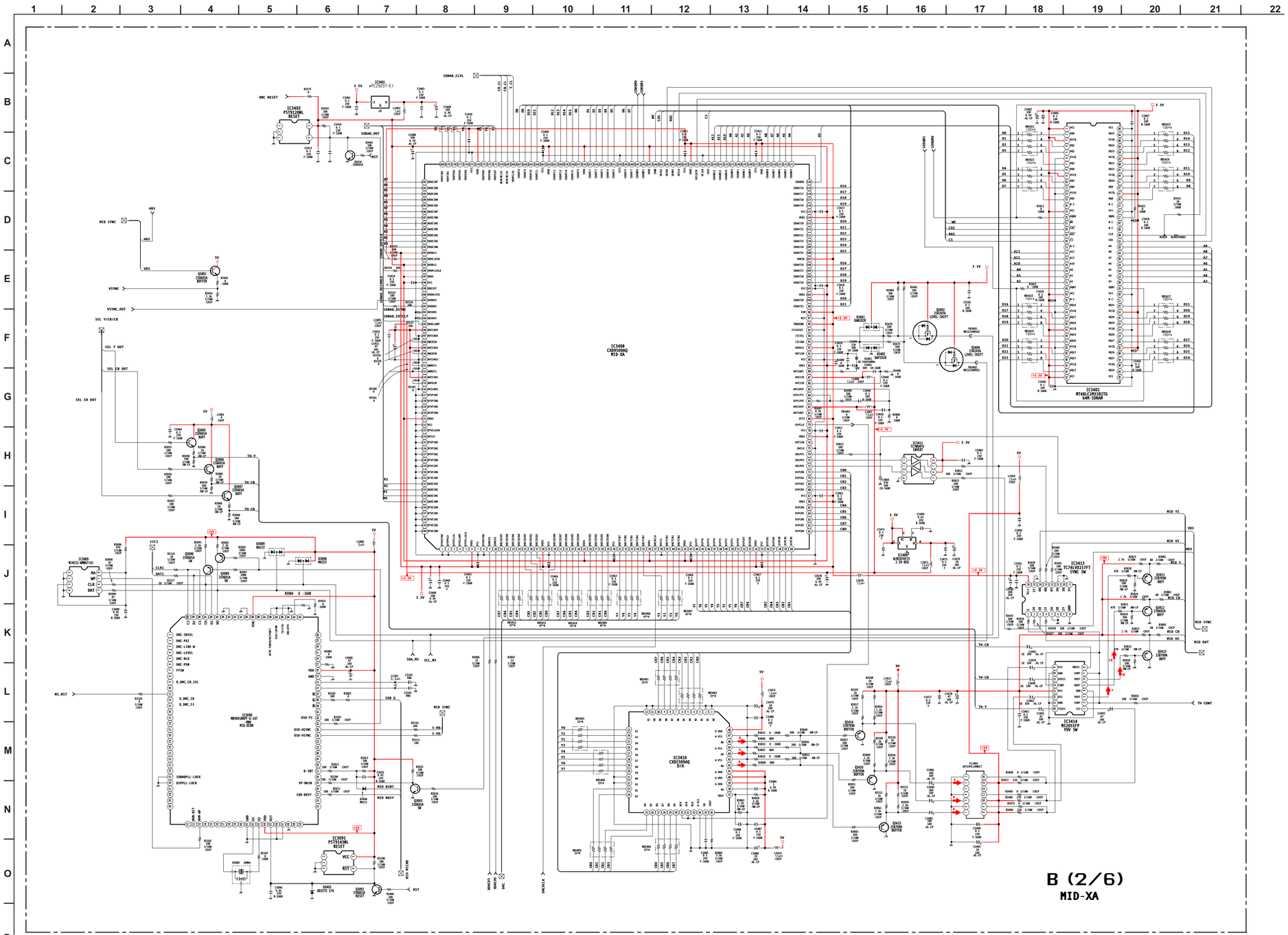
B BOARD WAVEFORMS

1	2	3
1.3 Vp-p (H)	1.2 Vp-p (H)	1.6 Vp-p (H)

B (1/6)
AD-DRC

9-965-926-01<BA4X> B(1/6)

B BOARD SCHEMATIC DIAGRAM (2 OF 6)



B BOARD SCHEMATIC DIAGRAM (3 OF 6)

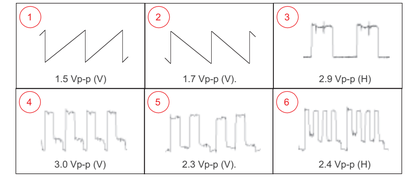
B (3/6)

HD-ADC

9-965-926-01<DAAX> B(3/6)

B BOARD SCHEMATIC DIAGRAM (4 OF 6)

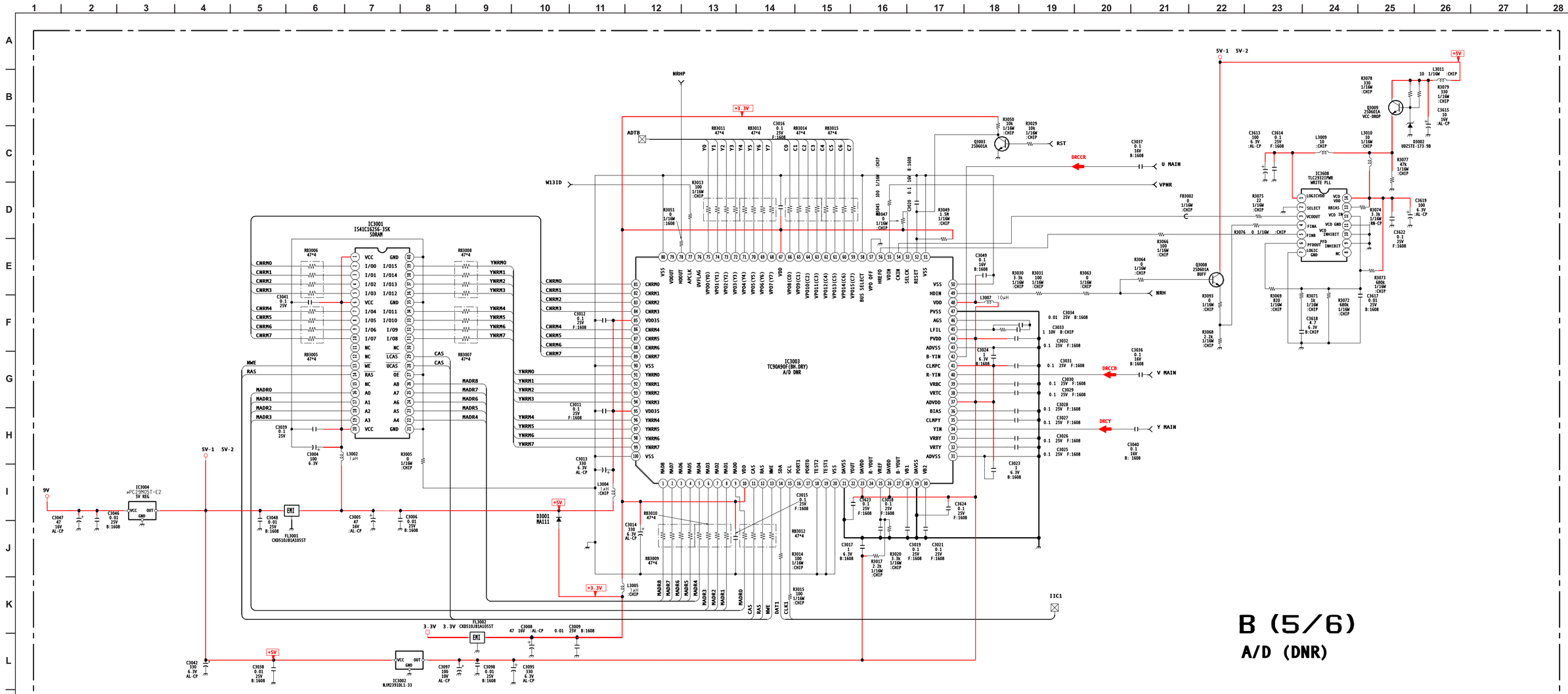
B BOARD WAVEFORMS



B (4/6)
CRT DRIVE

9-965-926-01<DAVX> B(4/6)

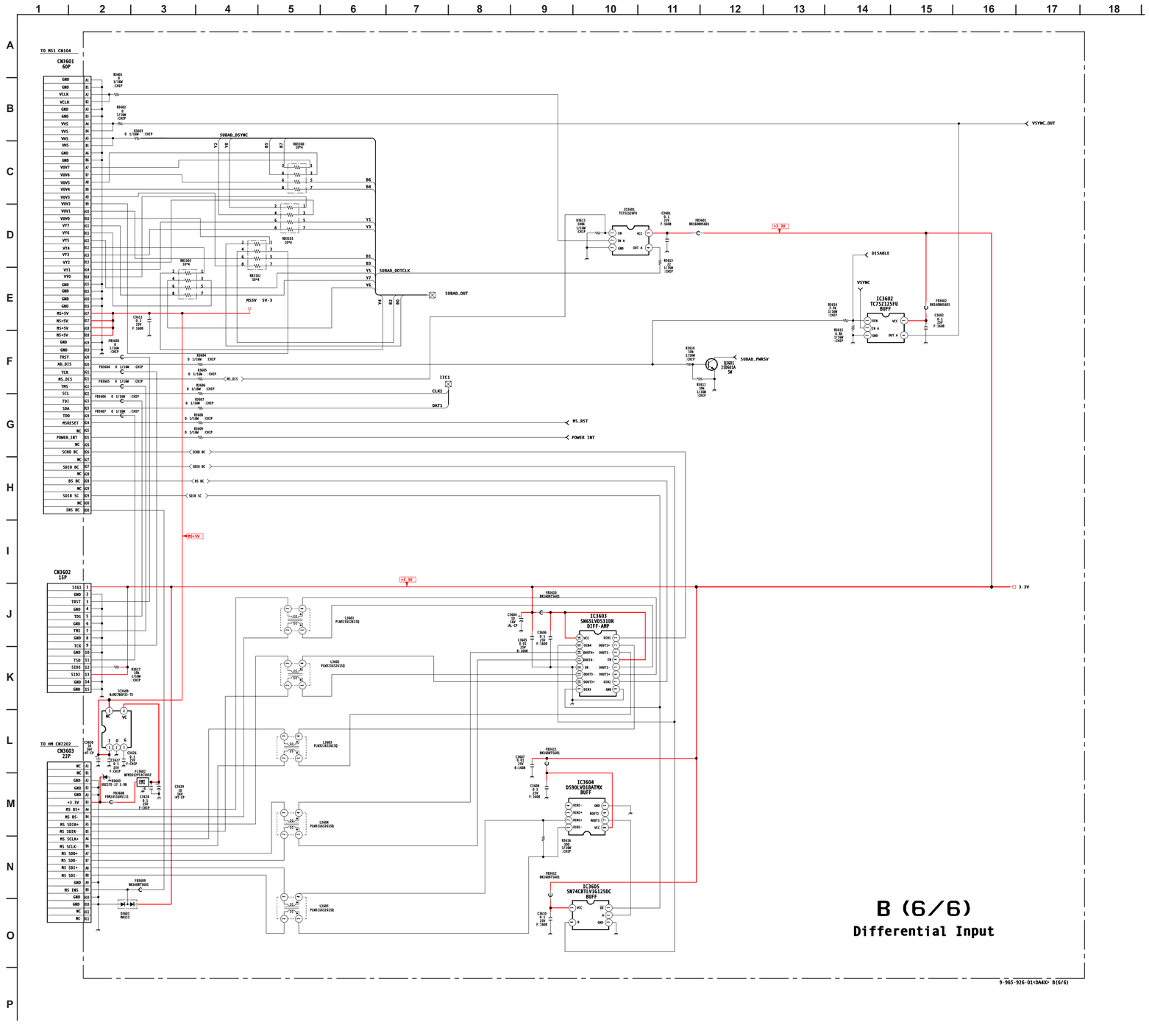
B BOARD SCHEMATIC DIAGRAM (5 OF 6)



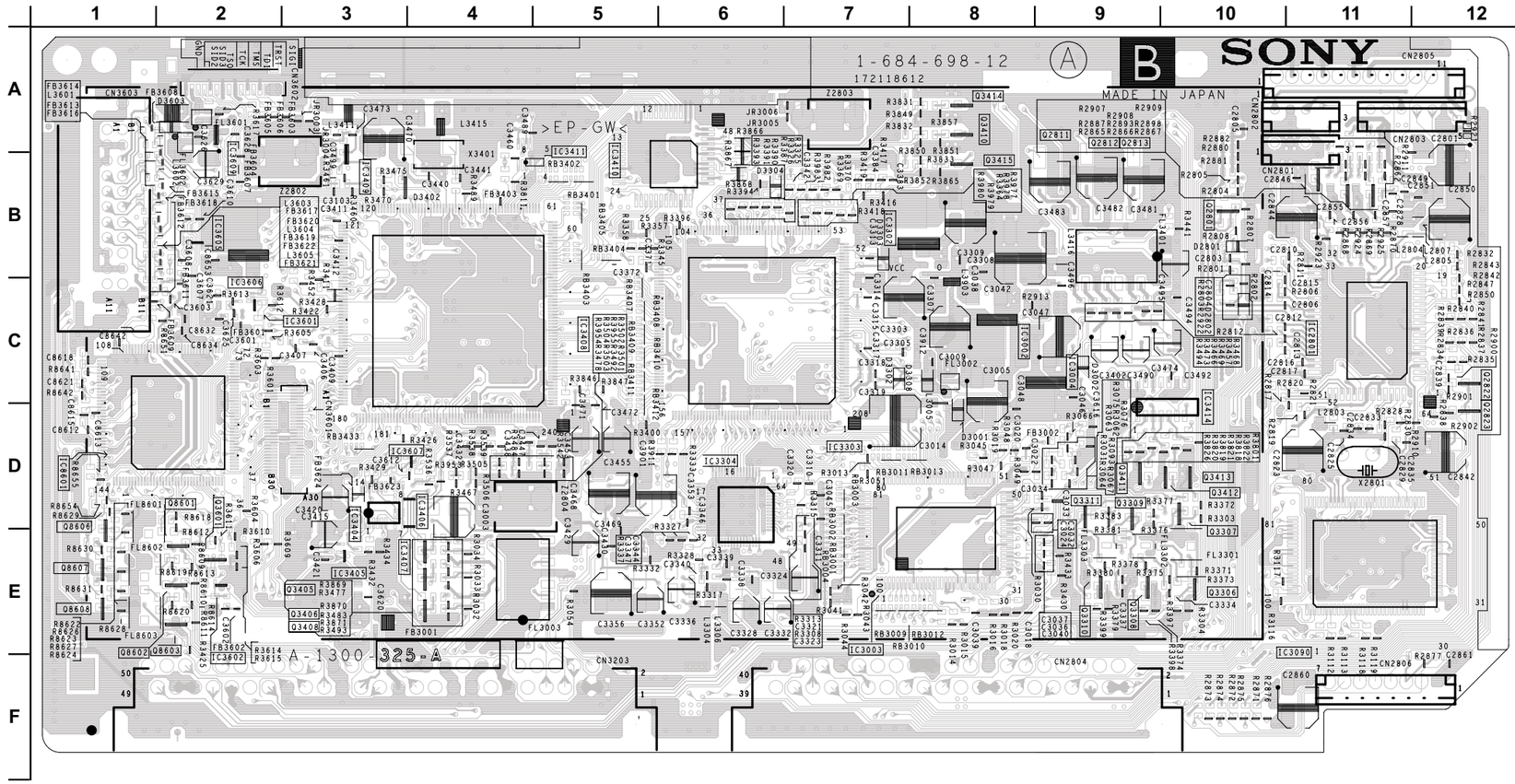
B (5/6)

A/D (DNR)

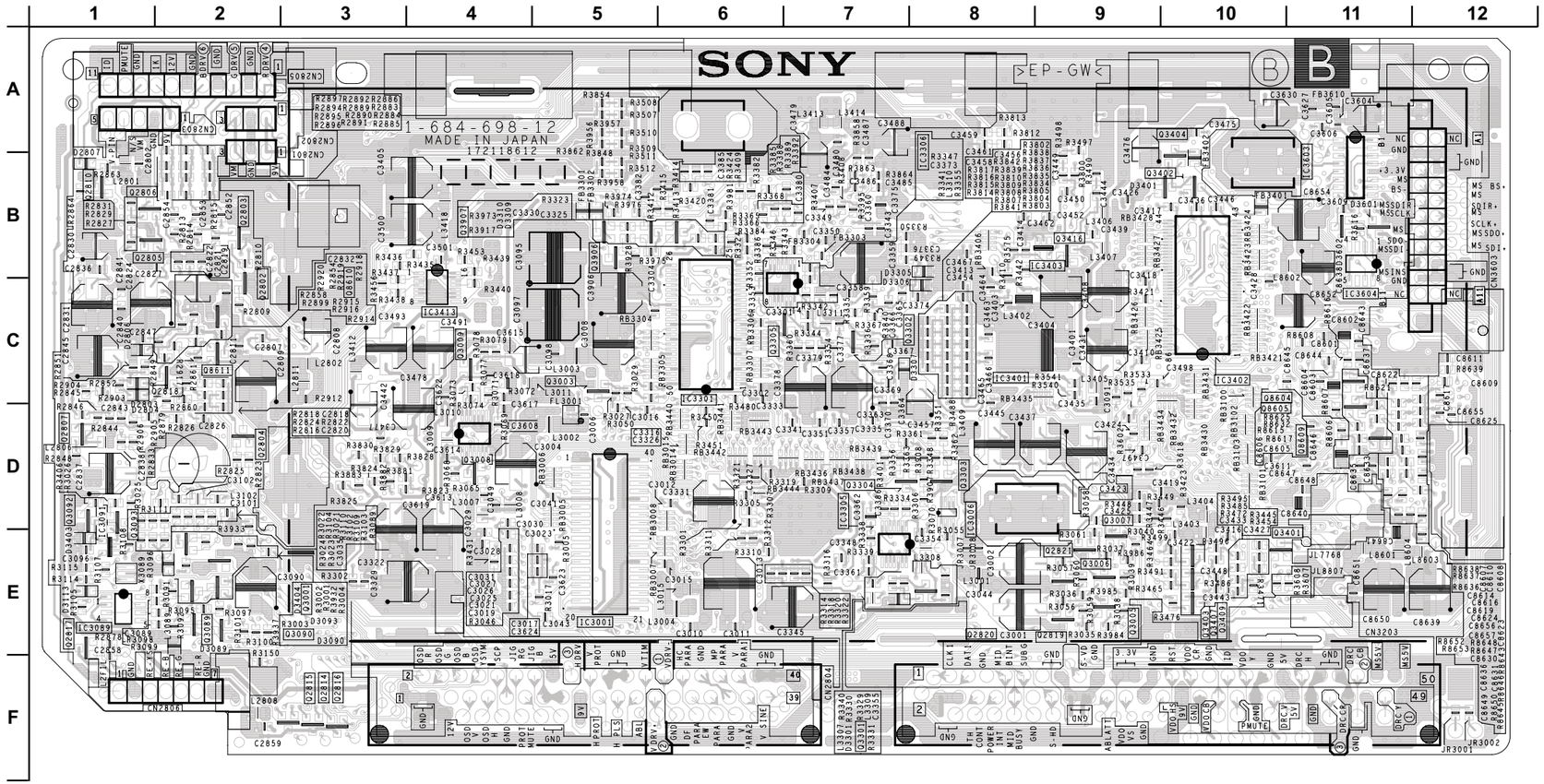
B BOARD SCHEMATIC DIAGRAM (6 OF 6)



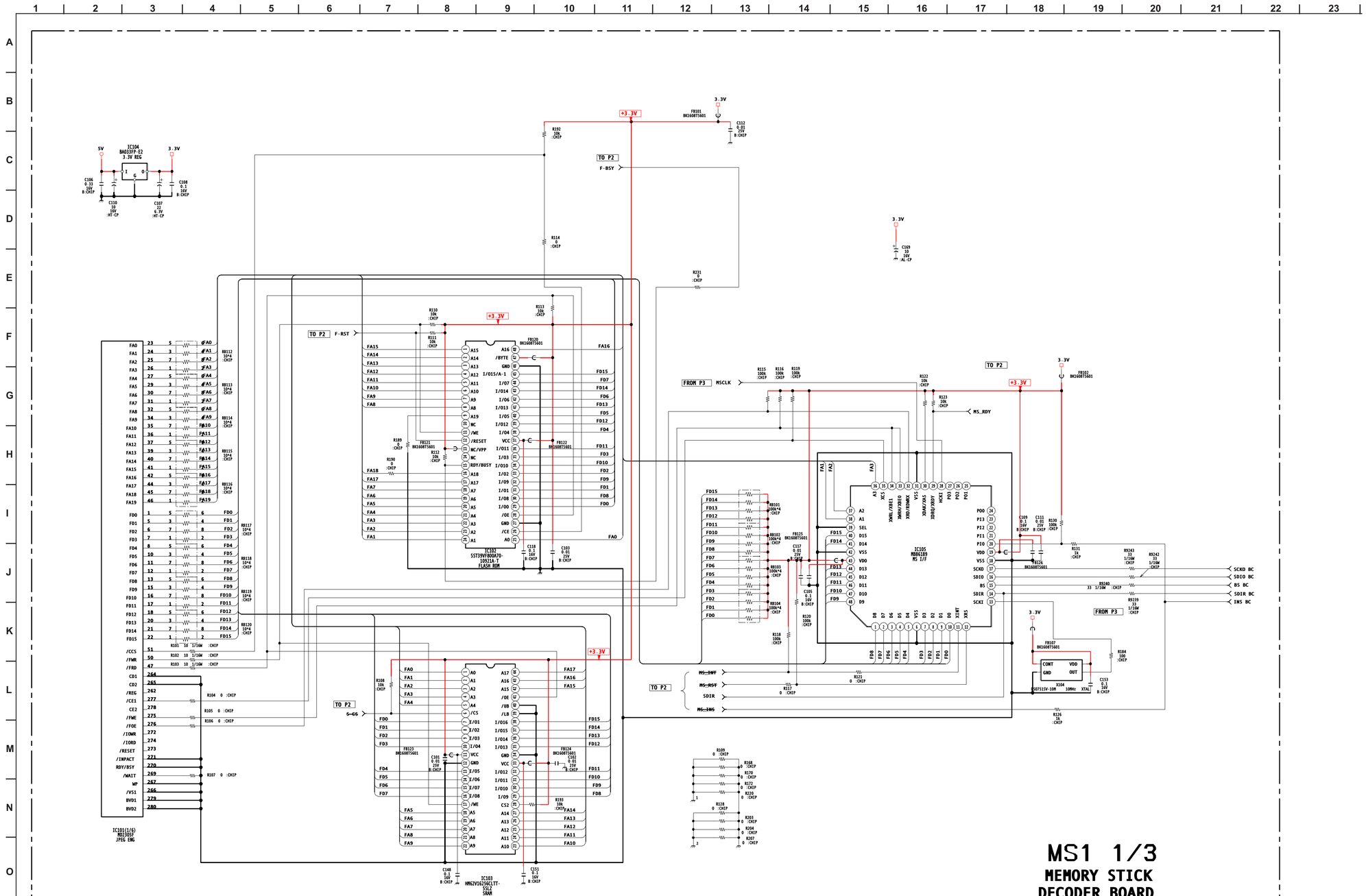
B [AD-DRC,MID-XA, HD-ADC, CRT DRIVE, A/D (DNR), DIFFERENTIAL INPUT] [COMPONENT SIDE]



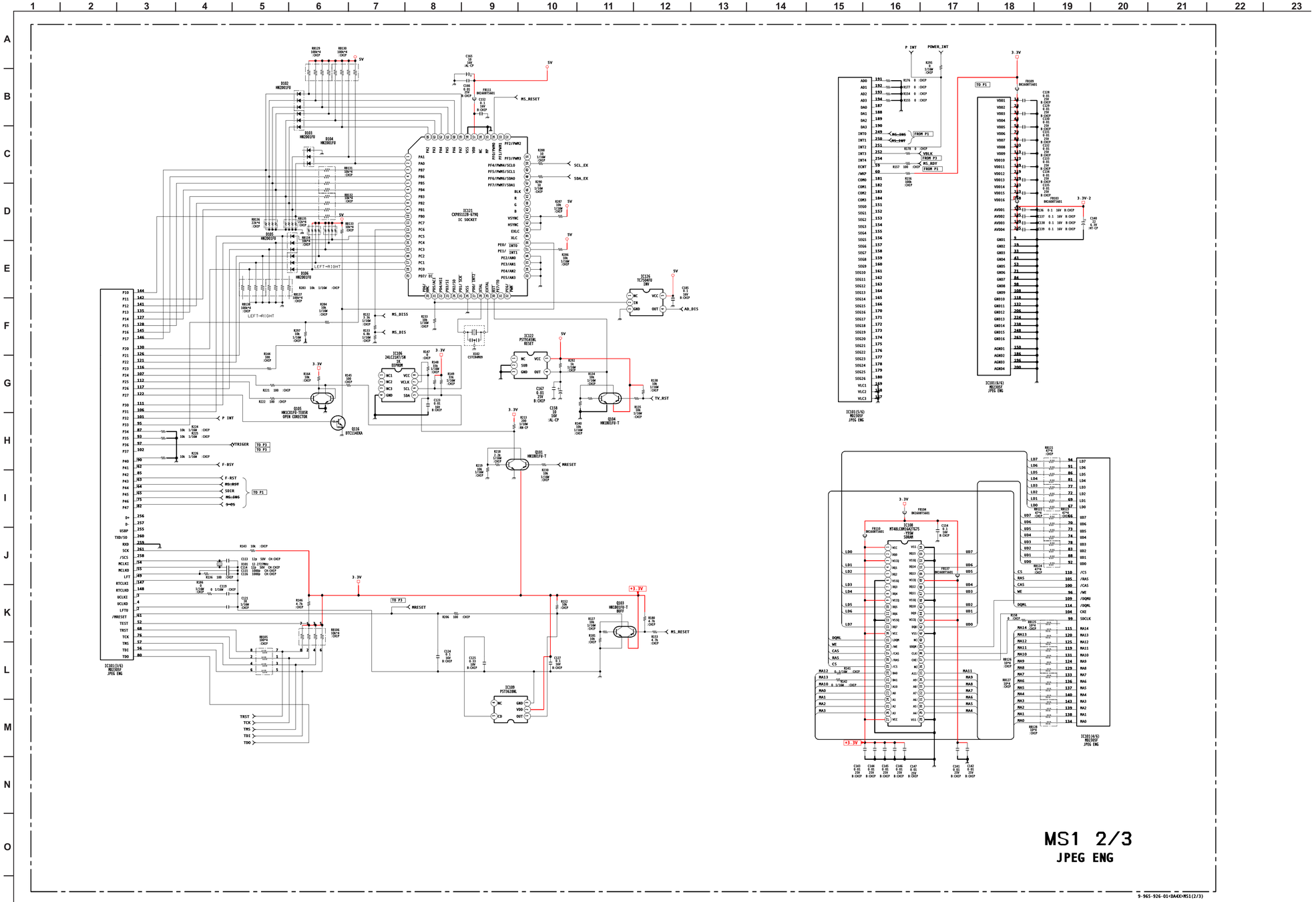
B [AD-DRC,MID-XA, HD-ADC, CRT DRIVE, A/D (DNR), DIFFERENTIAL INPUT] [CONDUCTOR SIDE]



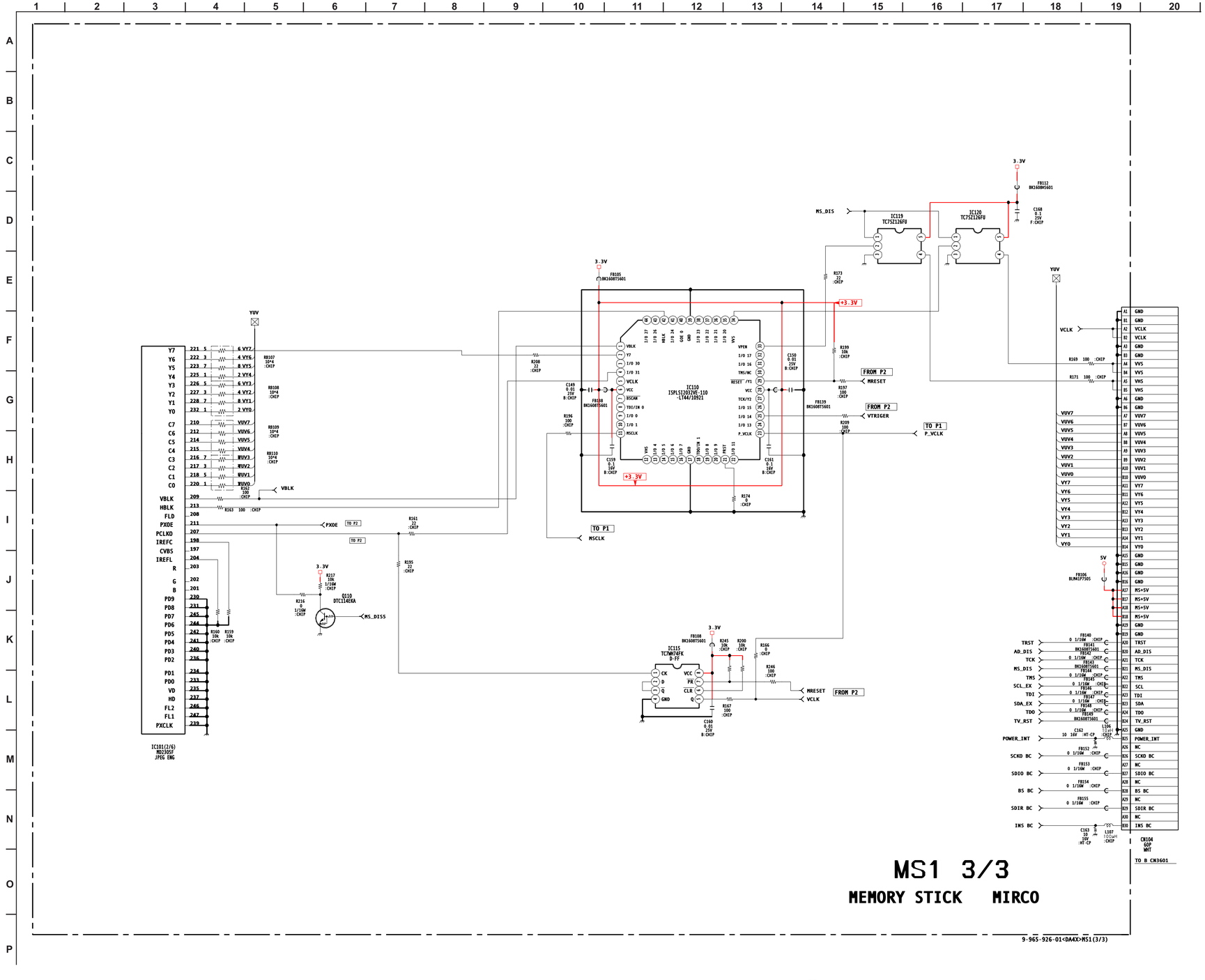
MS1 BOARD SCHEMATIC DIAGRAM (1 OF 3) The MS1 board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1300-408-A MS1 Board, Complete



MS1 BOARD SCHEMATIC DIAGRAM (2 OF 3)



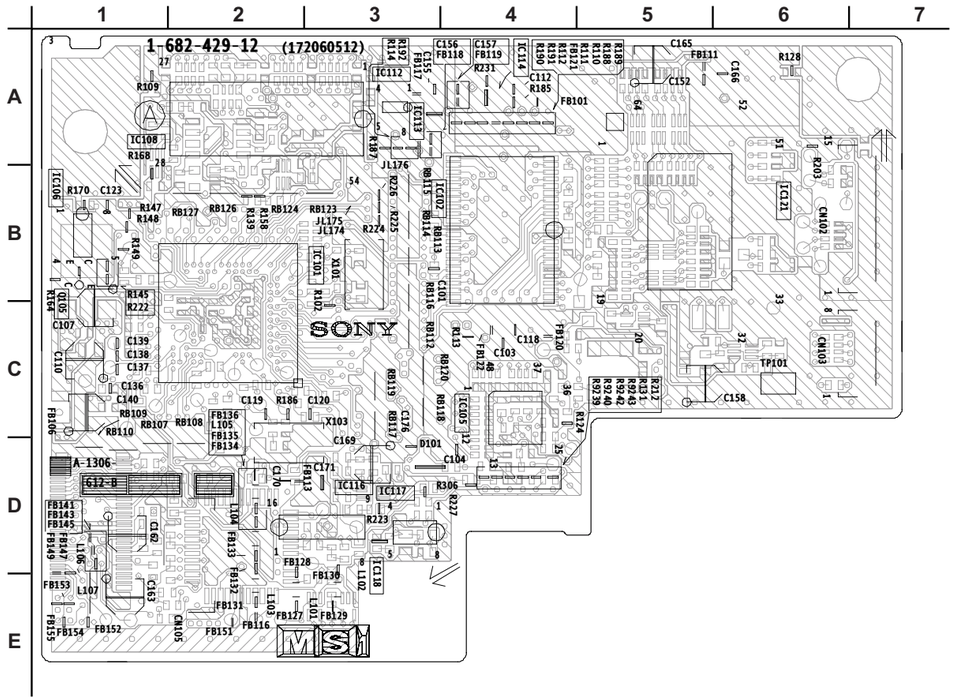
MS1 BOARD SCHEMATIC DIAGRAM (3 OF 3)



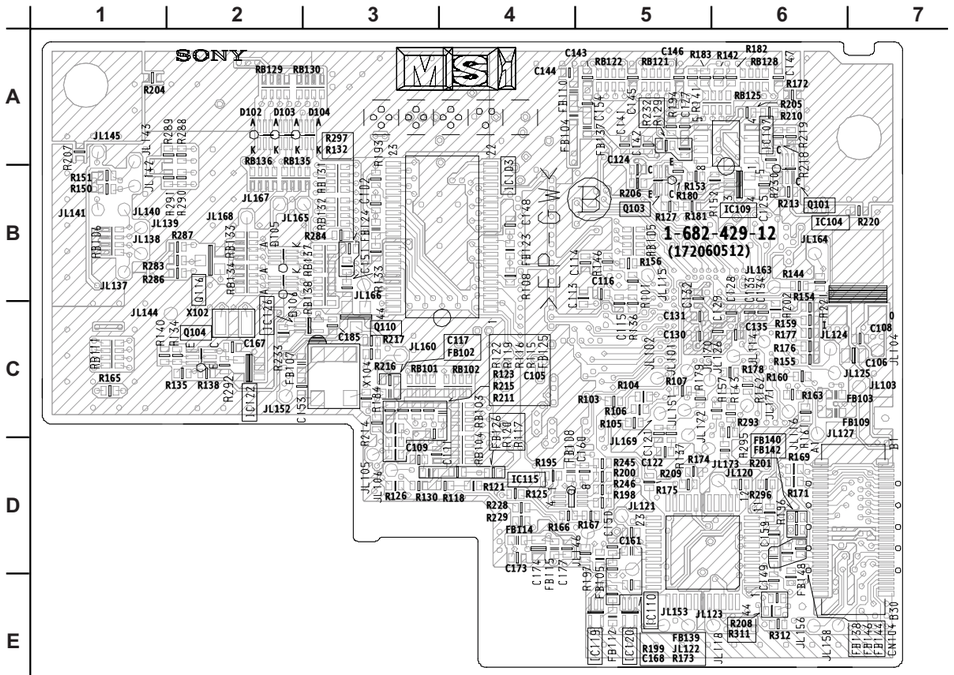
MS1

[MEMORY STICK, DECODER BOARD, JPEG ENG, MEMORY STICK MICRO]

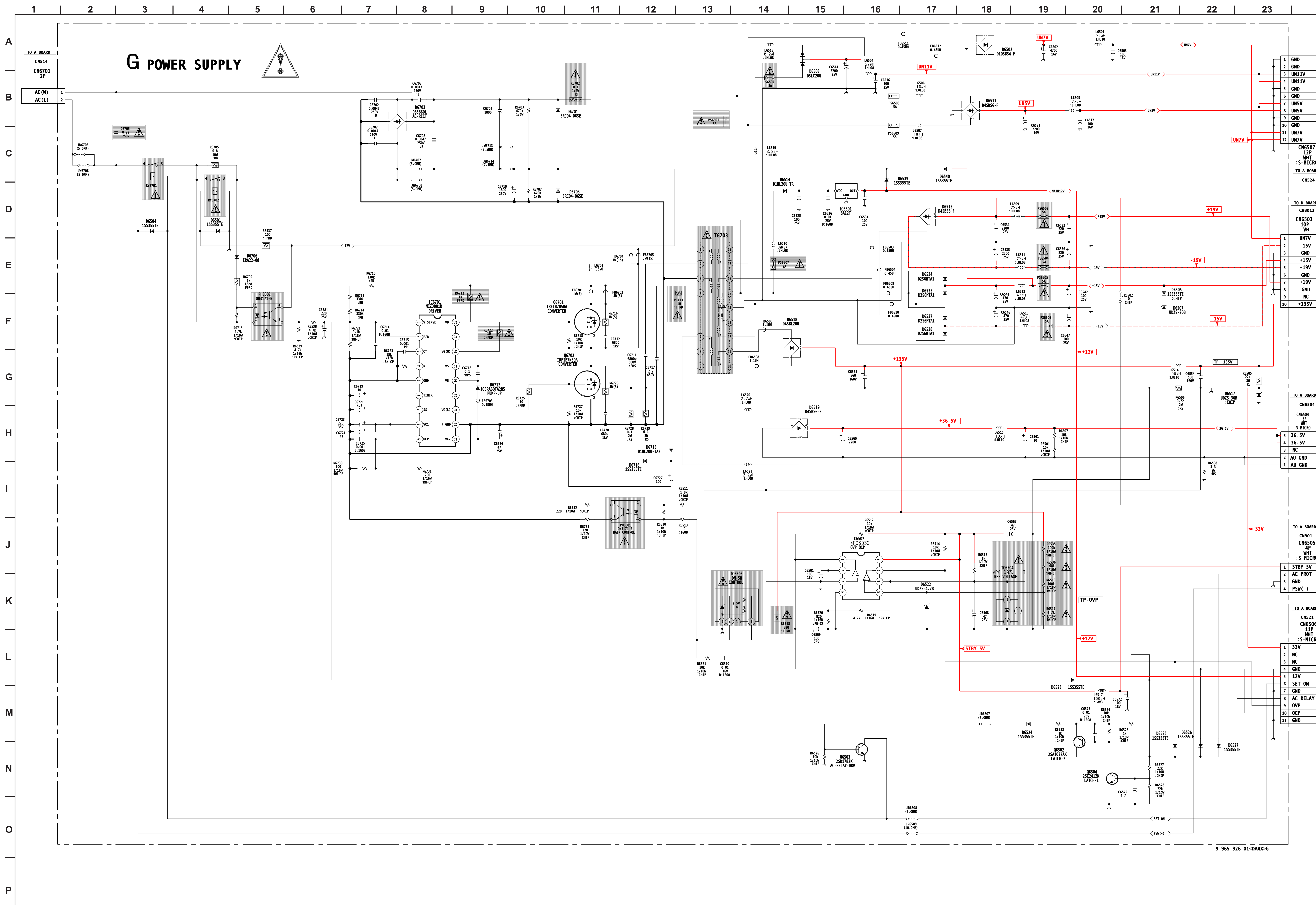
[COMPONENT SIDE]



[CONDUCTOR SIDE]



G BOARD SCHEMATIC DIAGRAM



G BOARD IC VOLTAGE LIST

IC6501		IC6503		3	2.2
PIN	VOLT	PIN	VOLT	4	1.5
VCC	15.0	1	133.7	5	GND
O	12.0	2	N/C	6	0.0
G	GND	3	2.5	7	4.6
IC6502		4	15.9	8	20.1
PIN	VOLT	5	GND	9	0.0
1	-0.2	IC6504		10	10.5
2	0.1	PIN	VOLT	11	GND
3	0.1	1	2.3	12	4.9
4	-0.2	2	0.0	13	N/C
5	2.1	3	2.3	14	155.6
6	2.3	IC6701		15	145.6
7	-0.2	PIN	VOLT	16	150.6
8	5.0	1	2.8	17	N/C
		2	1.9	18	304.5

All voltages are in V.

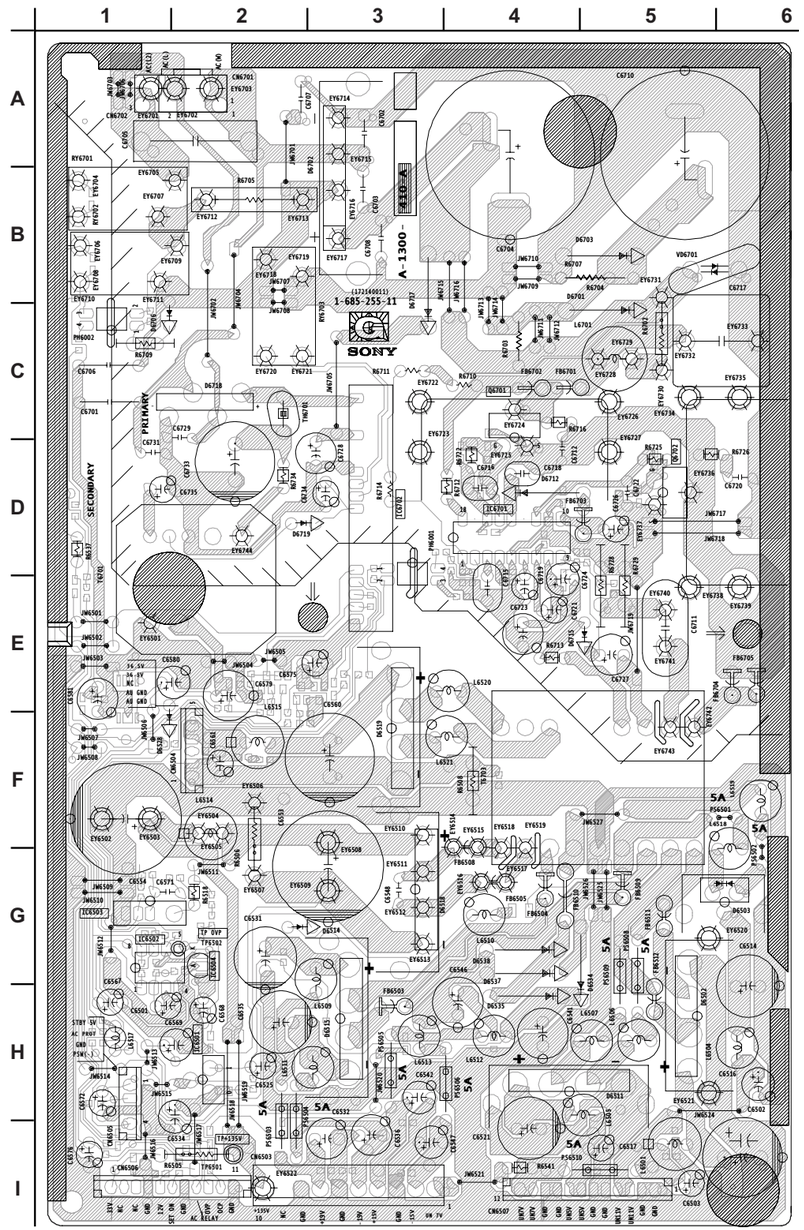
G BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q6502	2.2	0	2.2
Q6503	0.7	0.0	GND
Q6504	0.0	2.2	GND

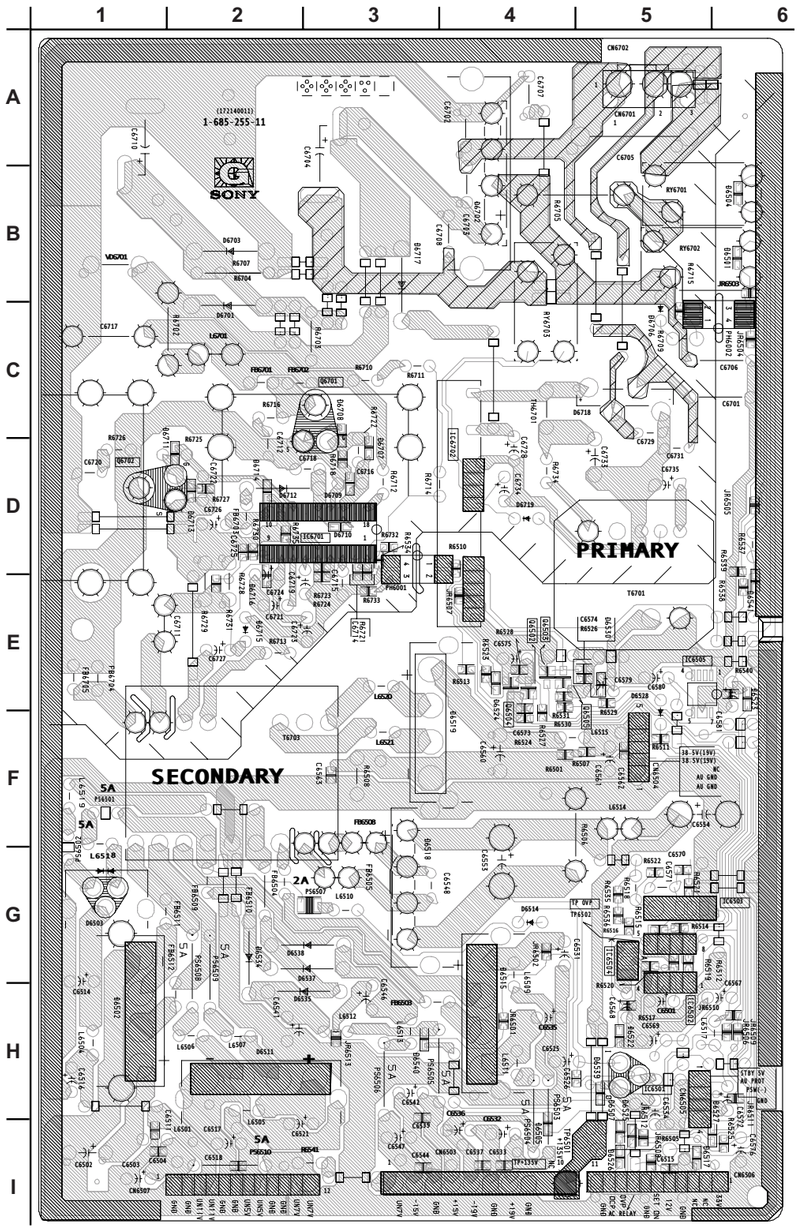
	D	G	S
Q6701	152.0	3.9	-1.5
Q6702	-1.3	-147.5	-152.2

All voltages are in V.

G [POWER SUPPLY] [COMPONENT SIDE]



[CONDUCTOR SIDE]

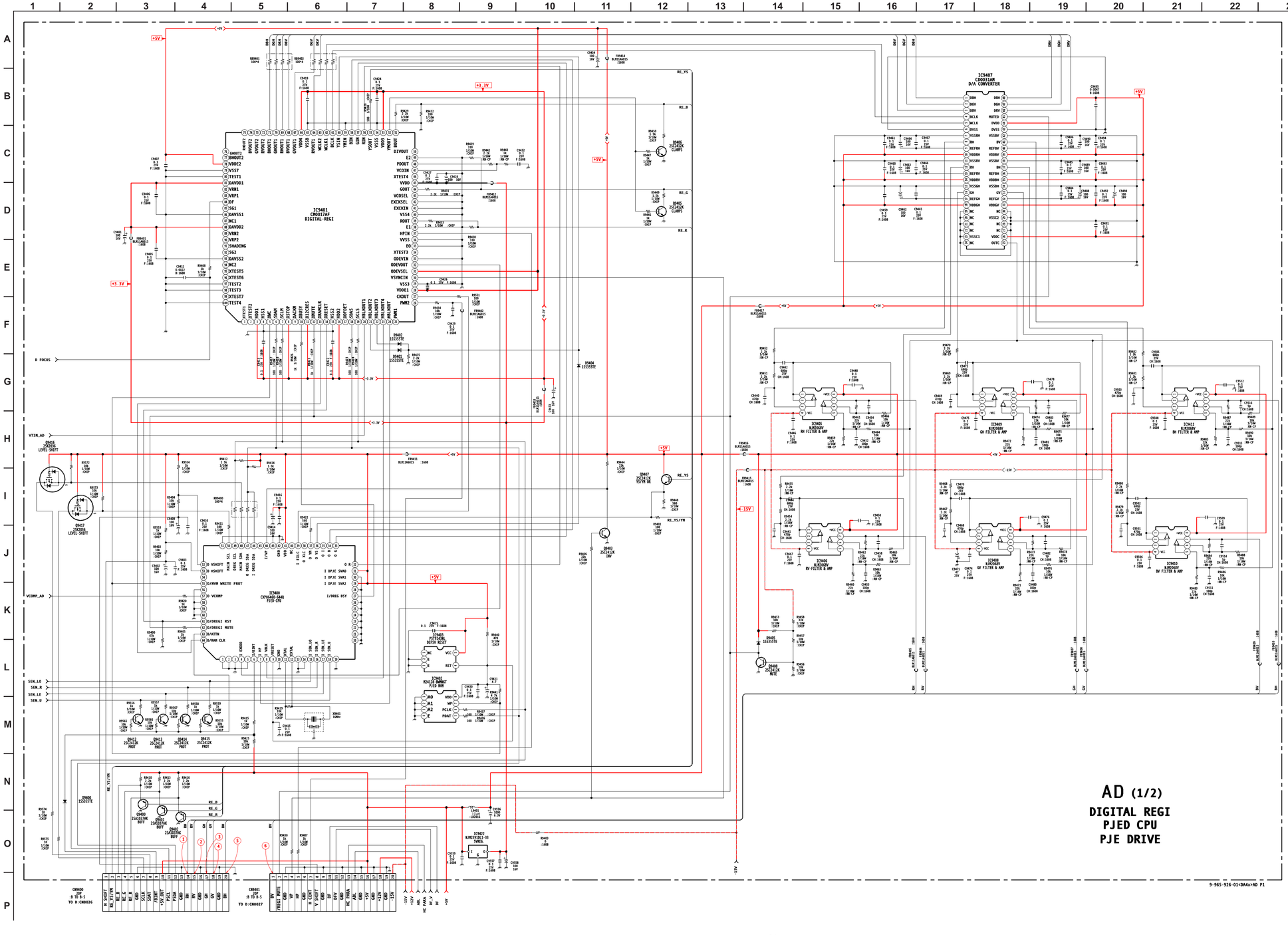


G BOARD

LOCATOR LIST	
IC	
IC6501	H-5
IC6502	H-5
IC6503	G-6
IC6504	G-5
IC6701	D-3
TRANSISTOR	
Q6502	E-4
Q6503	E-4
Q6504	E-4
Q6701	C-3
Q6702	D-1
DIODE	
D6501	B-6
D6502	H-1
D6503	G-1
D6504	B-6
D6505	I-4
D6507	H-5
D6511	H-2
D6514	G-4
D6515	G-4
D6517	I-5
D6518	F-3
D6519	E-3
D6522	H-5
D6523	F-6
D6524	E-4
D6525	H-5
D6526	I-5
D6527	H-6
D6534	G-2
D6535	G-2
D6537	G-2
D6538	G-2
D6539	H-4
D6540	H-3
D6701	C-2
D6702	B-4
D6703	B-2
D6706	B-5
D6712	D-2
D6715	E-2
D6716	E-2

AD BOARD SCHEMATIC DIAGRAM (1 OF 2)

The AD board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1300-411-A AD Board, Complete



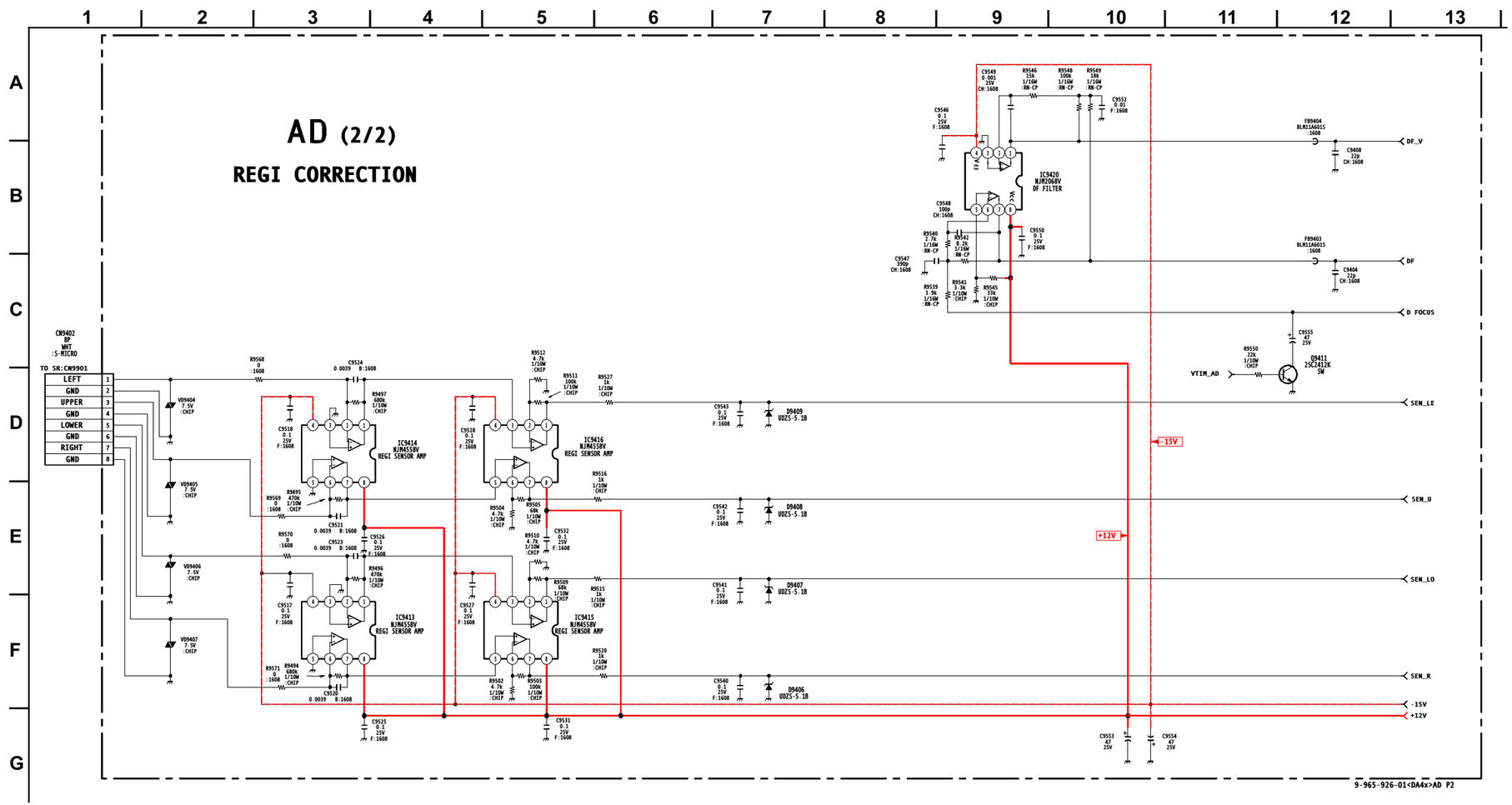
AD (1/2)

DIGITAL REGI
PJED CPU
PJE DRIVE

AD BOARD WAVEFORMS

1 — 2.1 Vp-p (V)	2 — 2.3 Vp-p (V)	3 — 2.1 Vp-p (V)
4 — 2.5 Vp-p (V)	5 — 2.0 Vp-p (V)	6 — 2.3 Vp-p (V)

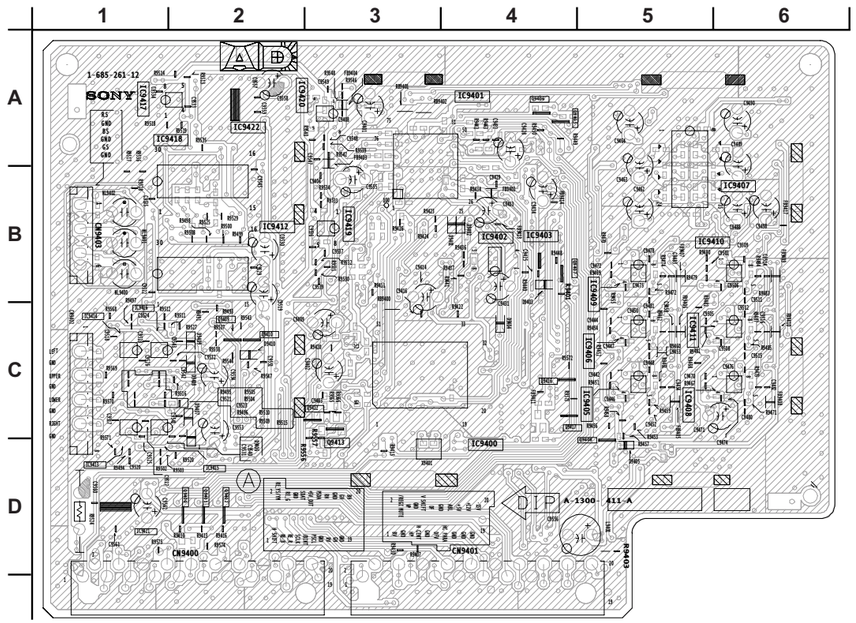
AD BOARD SCHEMATIC DIAGRAM (2 OF 2)



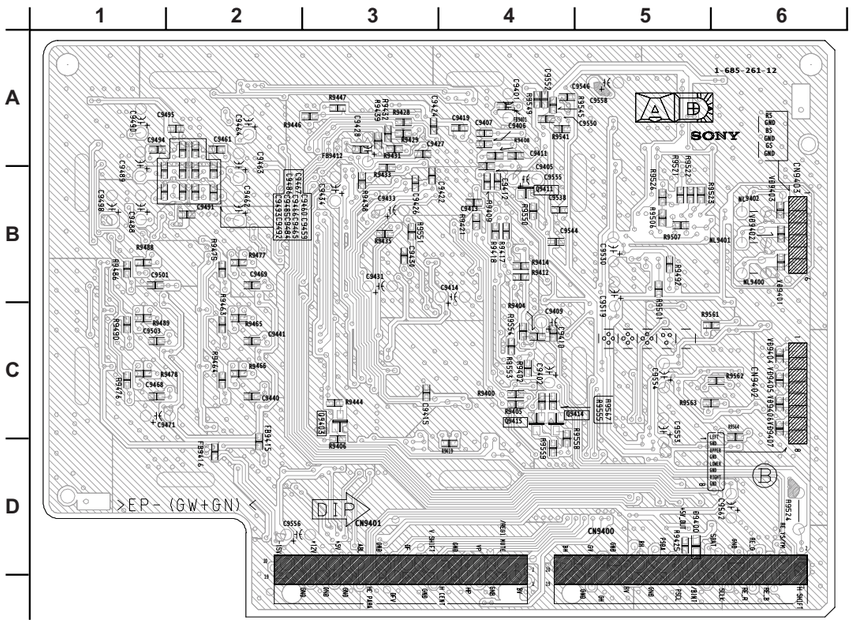
AD

[DIGITAL REGI, PJED CPU, PJE DRIVE, REGI CORRECTION]

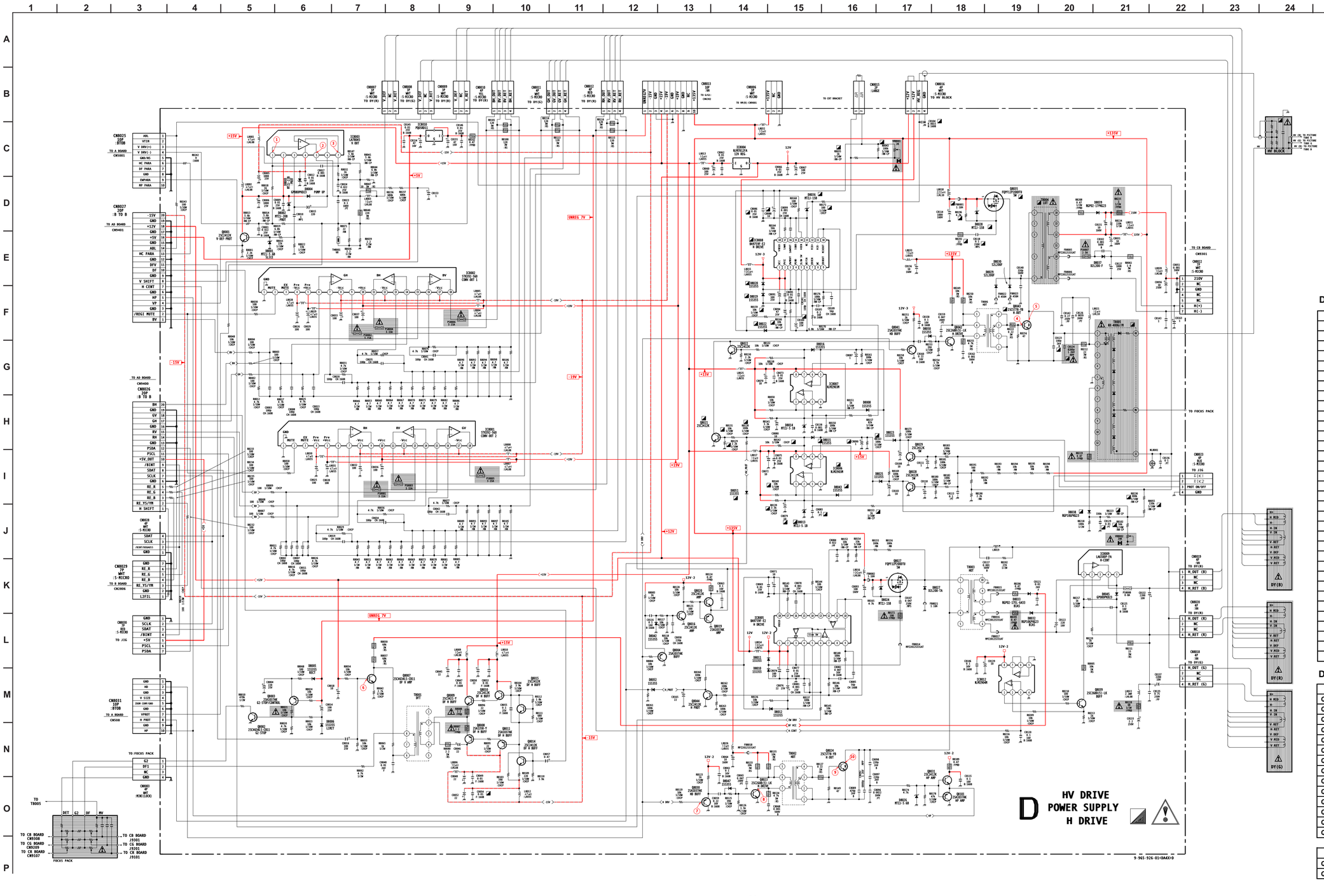
[COMPONENT SIDE]



[CONDUCTOR SIDE]



D BOARD SCHEMATIC DIAGRAM



D BOARD WAVEFORMS

1 — 500 mVp-p (V)	2 — 53.2 Vp-p (V)
3 — 500 mVp-p (V)	4 — 14.7 Vp-p (H)
5 — 940 Vp-p (H)	6 — 6.5 Vp-p (V)
7 — 3.5 Vp-p (H)	8 — 104 Vp-p (H)
9 — 7.6 Vp-p (H)	10 — 1030 Vp-p (H)

D BOARD IC VOLTAGE LIST

IC8001		14	0.3	15	GND	10	7.4
PIN	VOLT	15	0	16	3.2	11	7.4
1	GND	16	0	17	2.6	12	7.4
2	4.3	17	-22	18	9.1	13	GND
3	N/C	18	0.1	IC8006		14	7.1
4	-22.0	IC8003		PIN	VOLT	15	GND
5	22.0	PIN	VOLT	1	0.1	16	3.2
6	-0.3	1	1.3	2	5.0	17	2.6
7	-0.3	2	15.0	3	4.5	18	9.1
8	-22.0	3	-13.1	4	GND	IC8009	
9	-0.5	4	-15.0	5	0.0	PIN	VOLT
10	22.0	5	0.4	6	5.0	1	98.2
11	0.1	6	15.0	7	0.1	2	98.2
12	-22.0	7	1.3	8	15.0	3	94.0
13	0.0	IC8004		IC8007		4	97.8
14	0.0	PIN	VOLT	PIN	VOLT	5	101.1
15	0.0	I	15.0	1	0.1	IC8010	
16	0.0	O	12.0	2	5.0	PIN	VOLT
17	-22.0	G	GND	3	4.0	I	7.0
18	0.1	IC8005		4	GND	O	5.0
IC8002		PIN	VOLT	5	0.0	G	GND
PIN	VOLT	1	12.0	6	5.0	IC8012	
1	GND	2	12.0	7	0.1	PIN	VOLT
2	4.3	3	5.8	8	15.0	1	2.7
3	N/C	4	GND	IC8008		2	2.1
4	-22.0	5	7.9	PIN	VOLT	3	2.1
5	22.0	6	3.8	1	12.0	4	GND
6	-0.1	7	3.8	2	12.0	5	GND
7	-0.1	8	N/C	3	6.0	6	0.0
8	-22.0	9	3.8	4	GND	7	0.0
9	0.0	10	3.6	5	8.0	8	12.0
10	22.0	11	3.6	6	7.4	All voltages are in V.	
11	0.5	12	3.6	7	7.4		
12	-22.0	13	GND	8	N/C		
13	0.3	14	7.1	9	3.3		

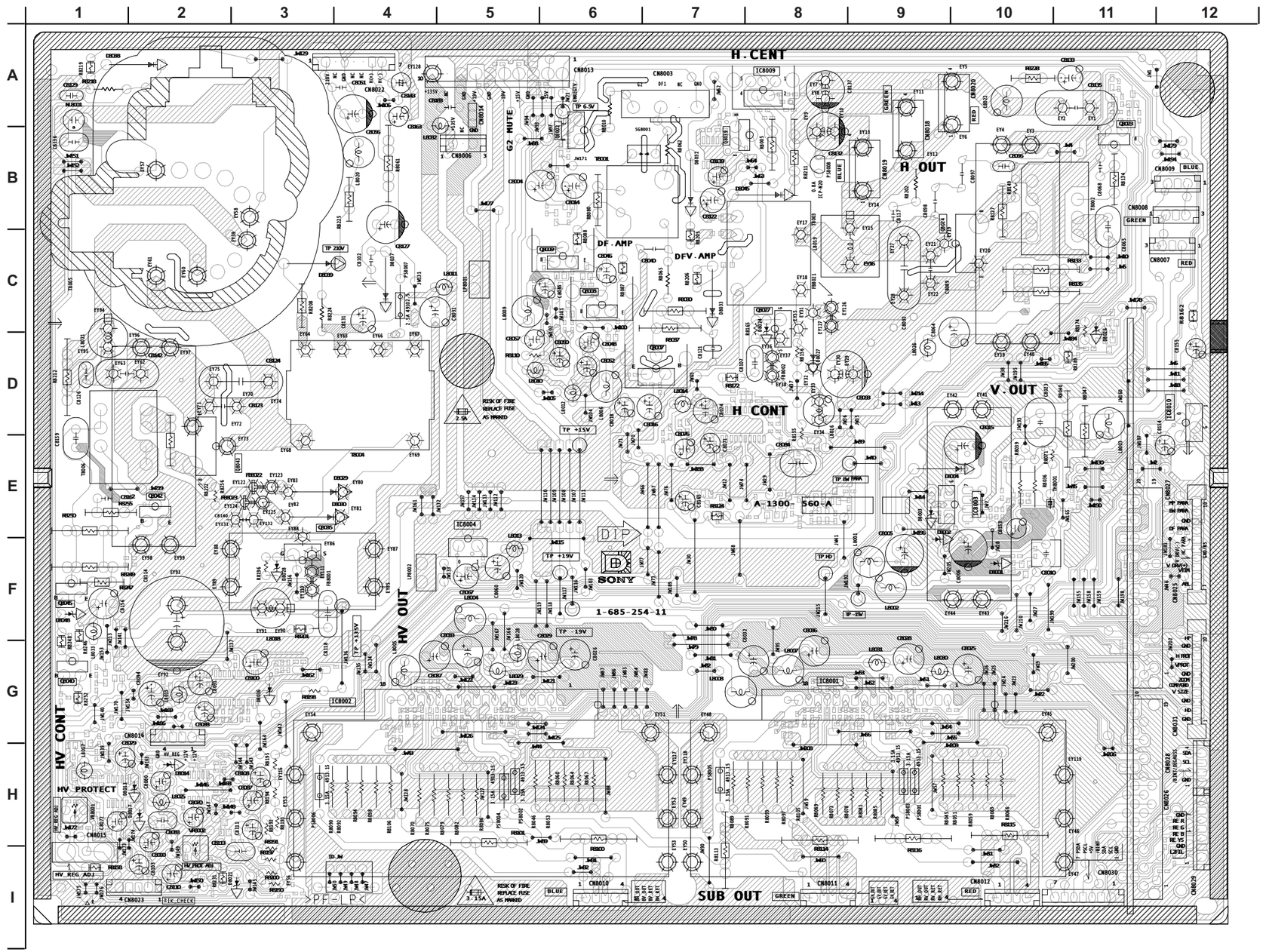
D BOARD TRANSISTOR VOLTAGE LIST

	B	C	E		B	C	E
Q8001	-0.4	15.0	0.1	Q8021	0.0	8.9	GND
Q8002	0	13.0	GND	Q8022	0.0	8.9	GND
Q8003	14.6	0.0	14.6	Q8023	-0.5	68.0	GND
Q8004	3.4	GND	4.0	Q8024	0.1	242.0	GND
Q8007	5.8	204.0	5.2	Q8028	0.5	0.0	GND
Q8008	2.8	-22.0	3.3	Q8029	0.5	0.0	GND
Q8009	4.0	22.0	3.4	Q8030	3.4	GND	4.0
Q8010	4.5	22.0	4.0	Q8031	0.2	12.0	0.6
Q8011	2.3	-22.0	2.7	Q8039	2.7	76.7	2.1
Q8014	-20.0	2.3	-20.6	Q8041	3.4	GND	8.9
Q8015	2.9	4.5	2.3	Q8042	9.6	29.8	GND
Q8016	-0.3	7.4	GND	Q8043	8.9	192.0	0.1
Q8019	7.4	GND	7.2	Q8044	0.6	0.0	GND
Q8020	7.4	12.0	7.2	Q8101	0.2	GND	0.6

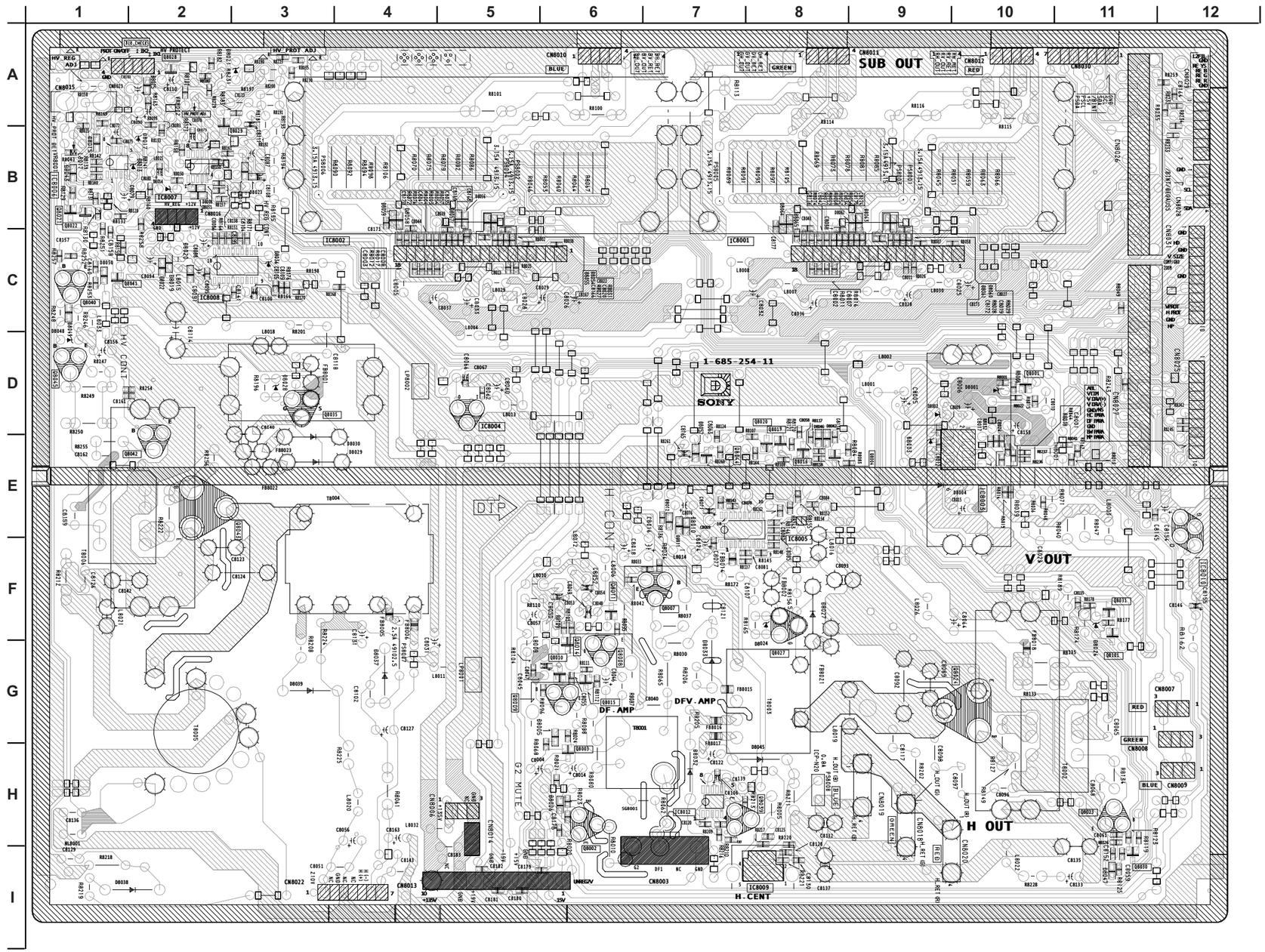
	D	G	S
Q8027	112.3	131.1	135.0
Q8035	115.6	130.9	135.9

All voltages are in V.

D [HV DRIVE, POWER SUPPLY, H DRIVE] [COMPONENT SIDE]



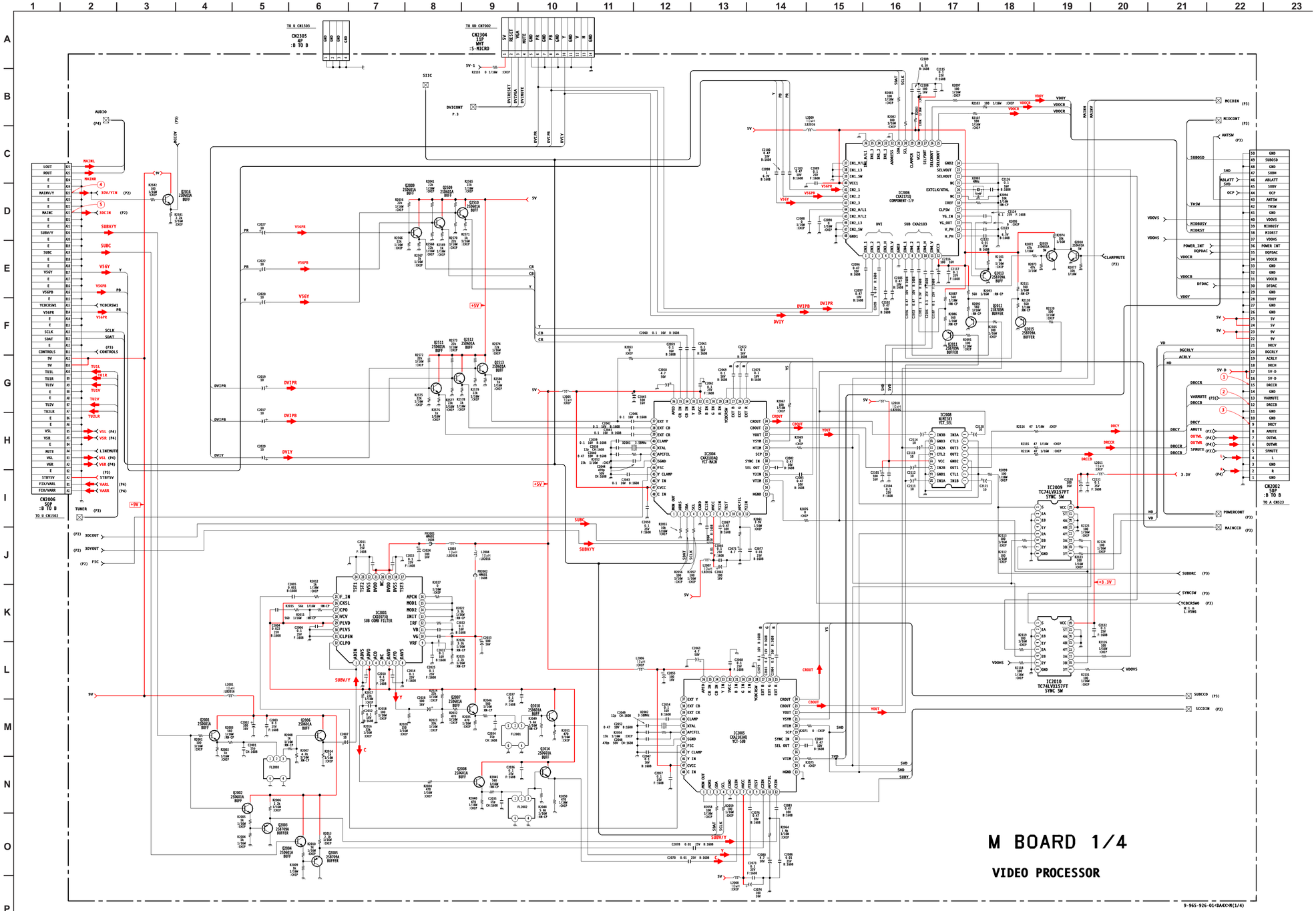
D [HV DRIVE, POWER SUPPLY, H DRIVE] [CONDUCTOR SIDE]



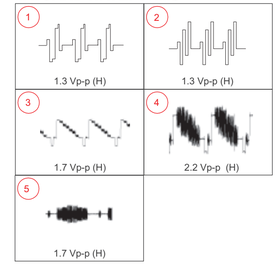
D BOARD LOCATOR LIST			
IC		DIODE	
IC8001	C-7	D8001	D-10
IC8002	C-3	D8002	D-9
IC8003	E-10	D8003	D-9
IC8004	D-5	D8004	E-9
IC8005	F-8	D8005	H-5
IC8006	B-1	D8006	H-6
IC8007	B-2	D8008	B-2
IC8008	C-2	D8010	E-7
IC8009	I-8	D8011	E-7
IC8010	F-12	D8012	E-7
IC8012	H-7	D8013	B-2
TRANSISTOR		D8014	B-2
Q8001	D-10	D8015	B-1
Q8002	H-6	D8016	B-3
Q8003	G-6	D8019	C-2
Q8004	E-9	D8020	C-2
Q8007	F-7	D8022	C-2
Q8008	G-6	D8023	B-3
Q8009	G-5	D8024	G-7
Q8010	G-6	D8025	A-2
Q8011	F-6	D8026	G-11
Q8014	G-6	D8027	F-8
Q8015	G-6	D8028	D-3
Q8016	E-8	D8029	E-3
Q8019	D-8	D8030	E-3
Q8020	D-8	D8032	H-7
Q8021	B-1	D8033	G-7
Q8022	B-1	D8036	C-3
Q8023	H-11	D8037	G-4
Q8024	G-10	D8038	I-2
Q8027	F-8	D8039	G-3
Q8028	A-2	D8042	D-8
Q8029	B-3	D8043	B-1
Q8030	I-11	D8045	H-8
Q8031	F-11	D8047	I-11
Q8035	D-3	D8050	C-1
Q8039	H-8	D8051	B-2
Q8041	C-2	D8052	D-7
Q8042	E-2		
Q8043	E-3		
Q8044	E-8		
Q8101	G-11		

M BOARD SCHEMATIC DIAGRAM (1 OF 4)

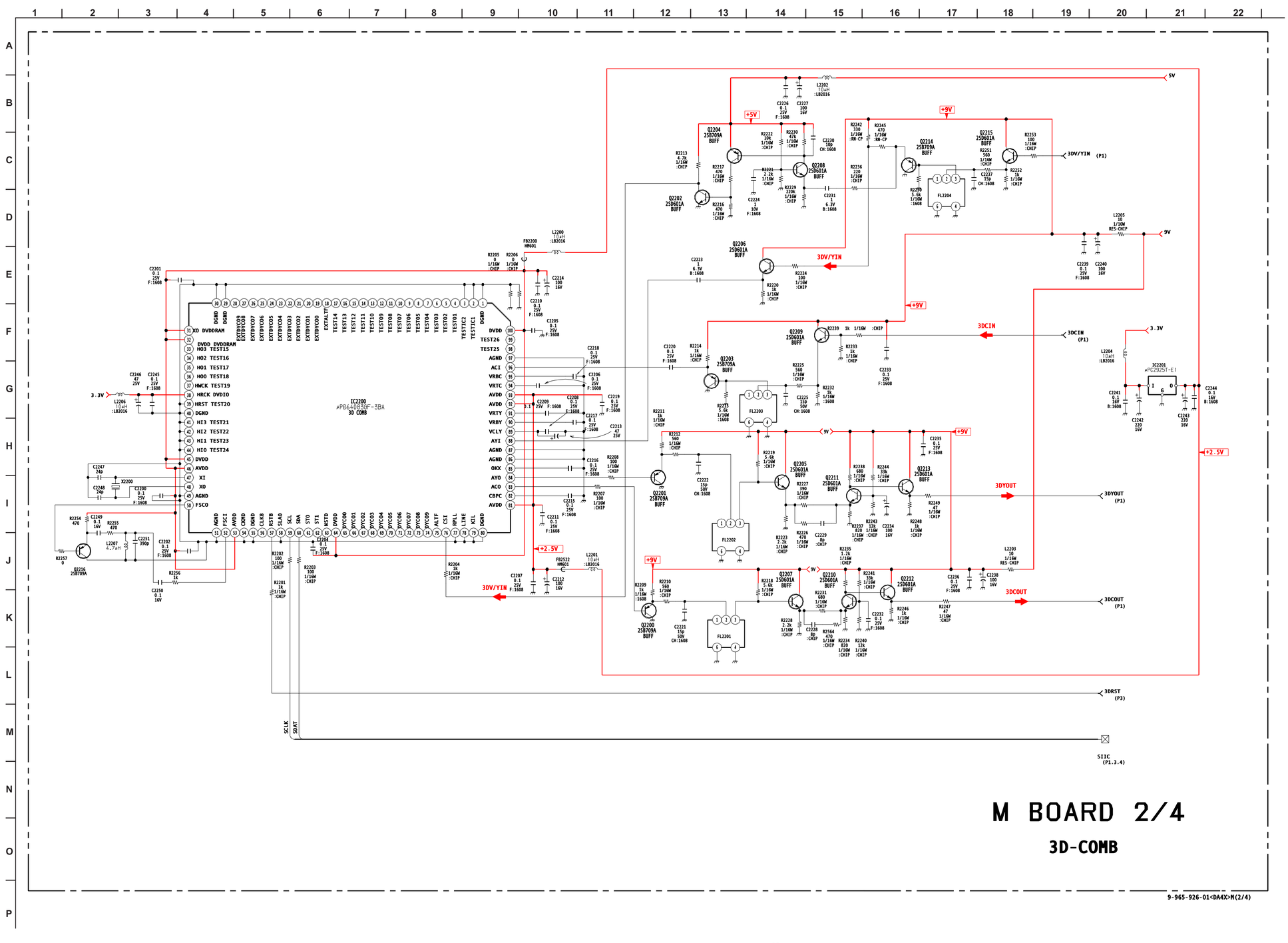
The M board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1300-646-A M Board, Complete



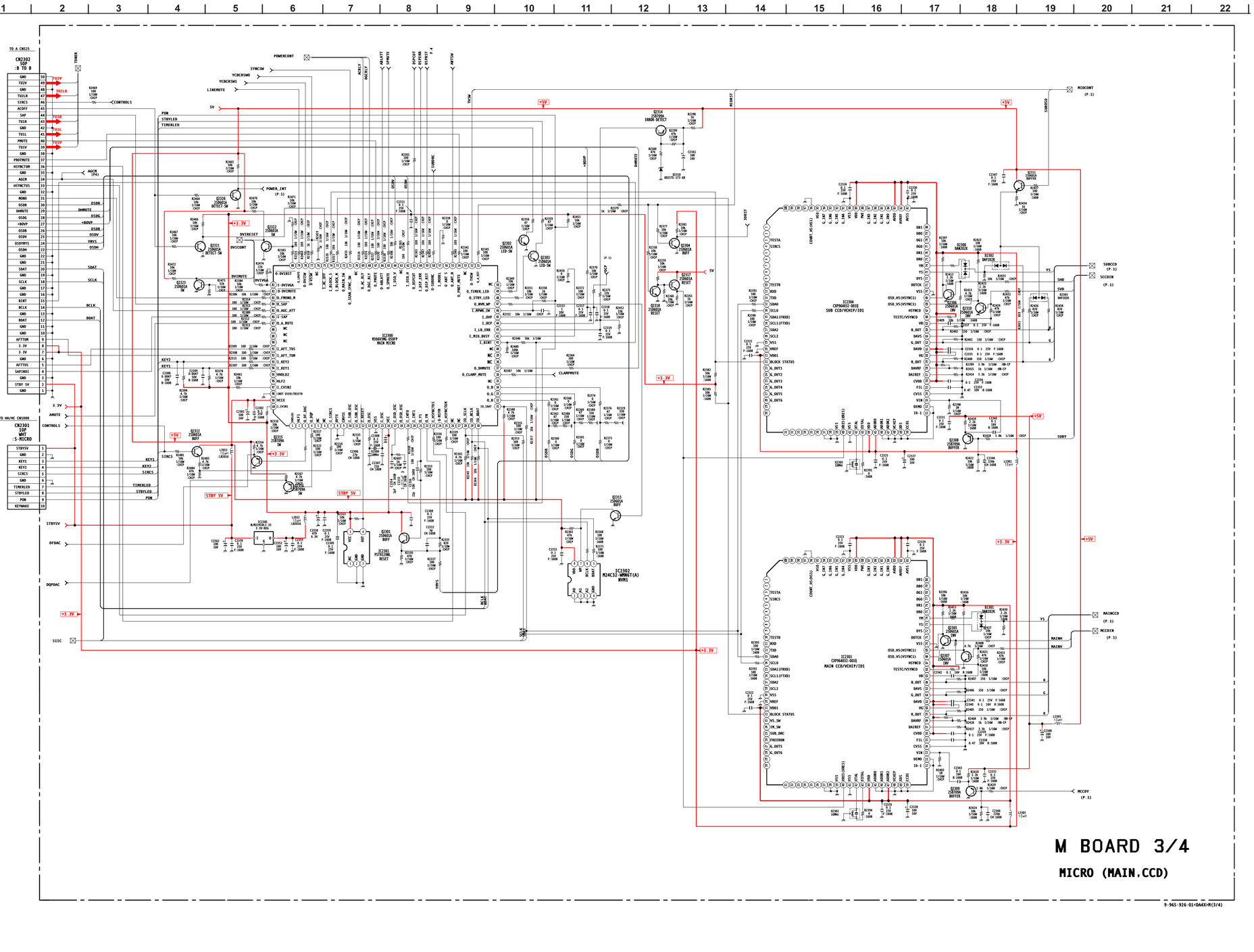
M BOARD WAVEFORMS



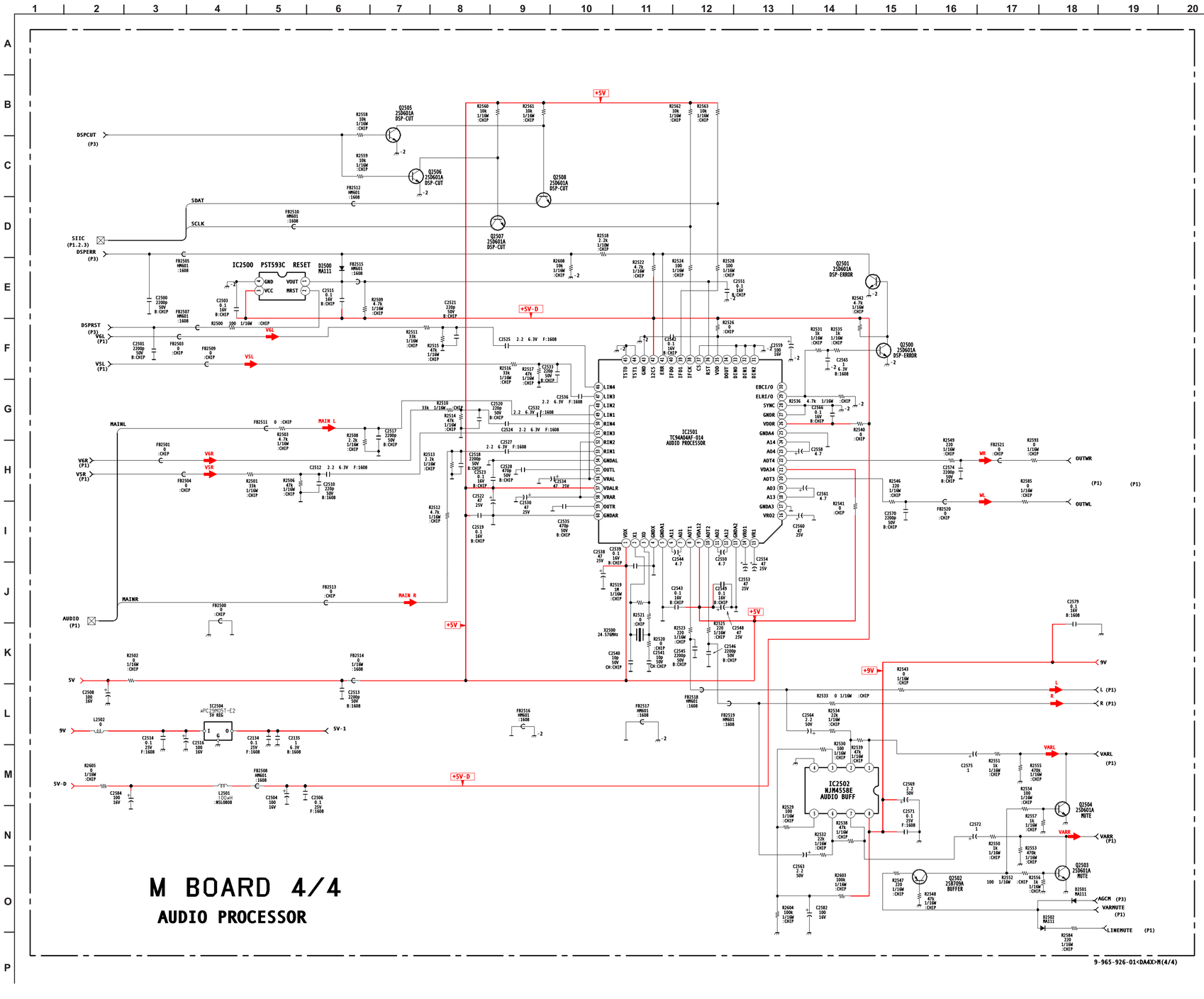
M BOARD SCHEMATIC DIAGRAM (2 OF 4)



M BOARD SCHEMATIC DIAGRAM (3 OF 4)



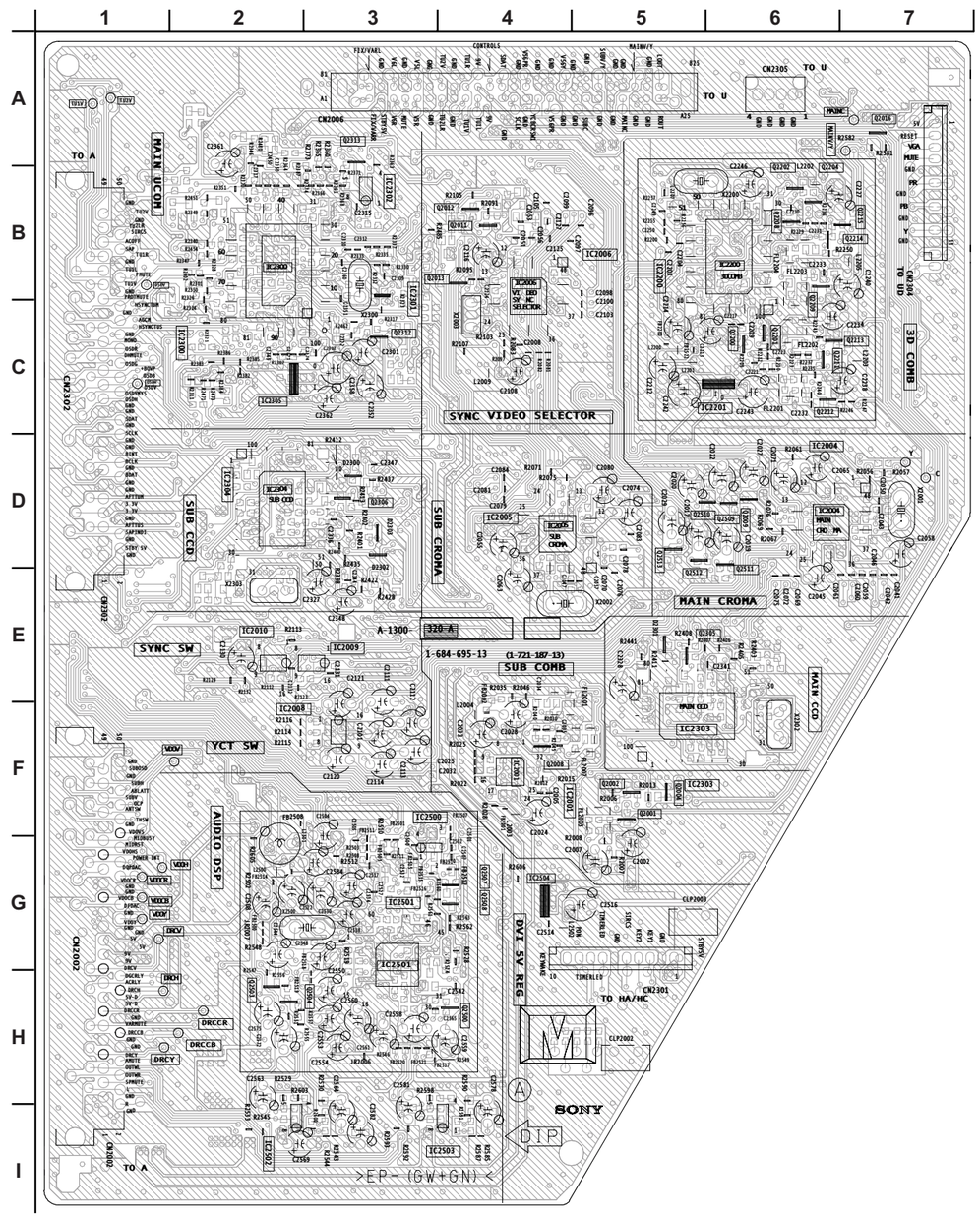
M BOARD SCHEMATIC DIAGRAM (4 OF 4)



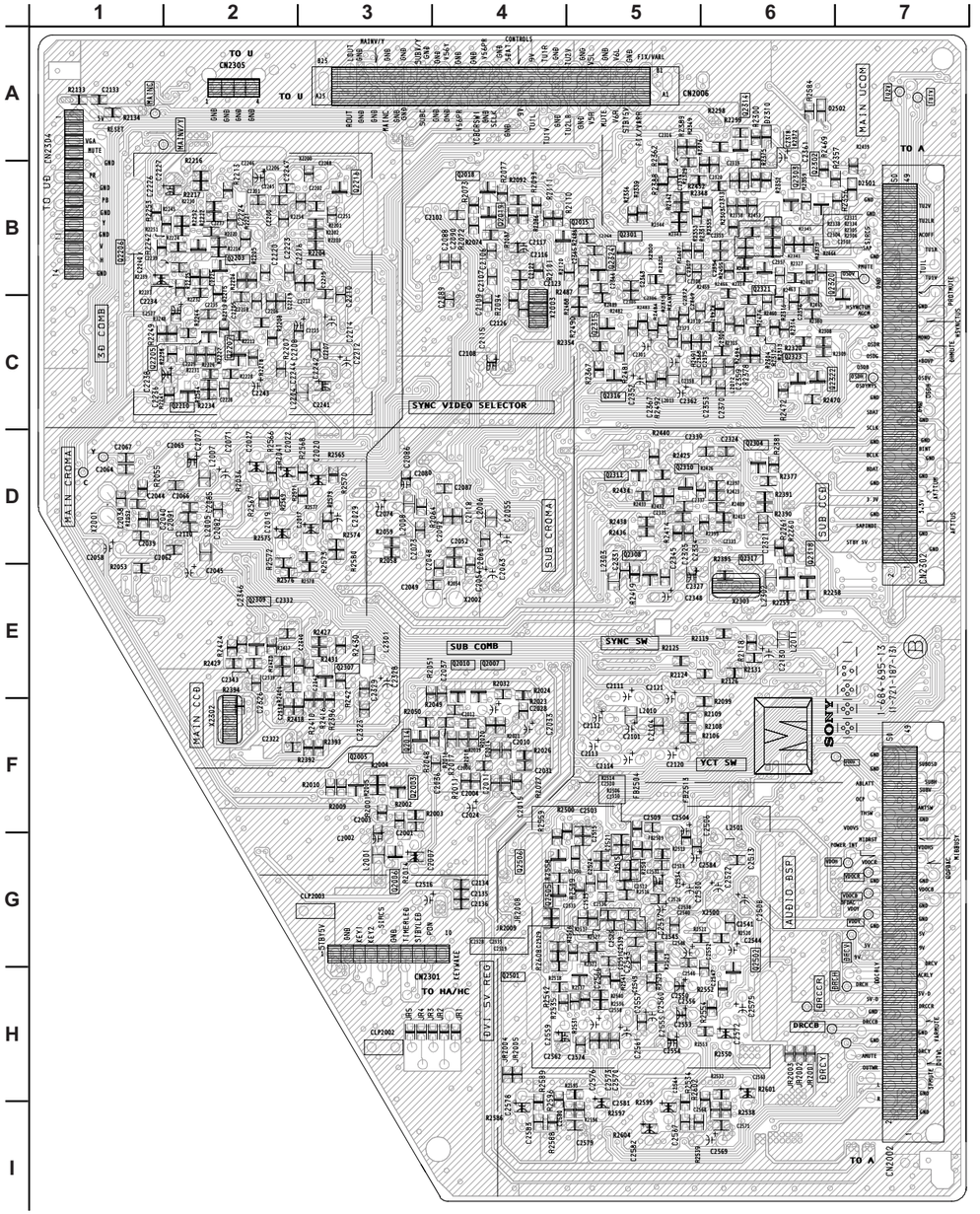
M

[VIDEO PROCESSOR, 3-D COMB, MICRO (MAIN, CCD), AUDIO PROCESSOR]

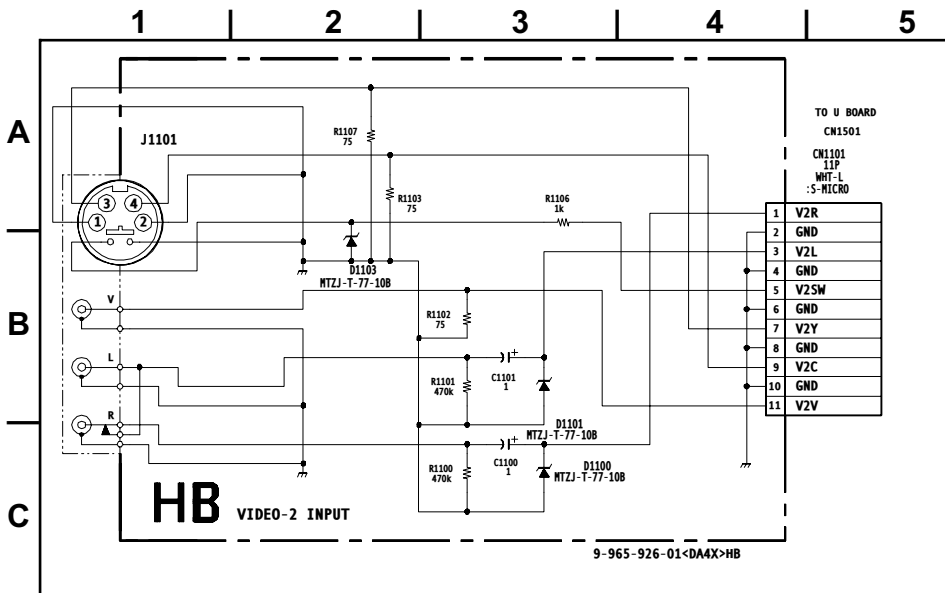
[COMPONENT SIDE]



[CONDUCTOR SIDE]

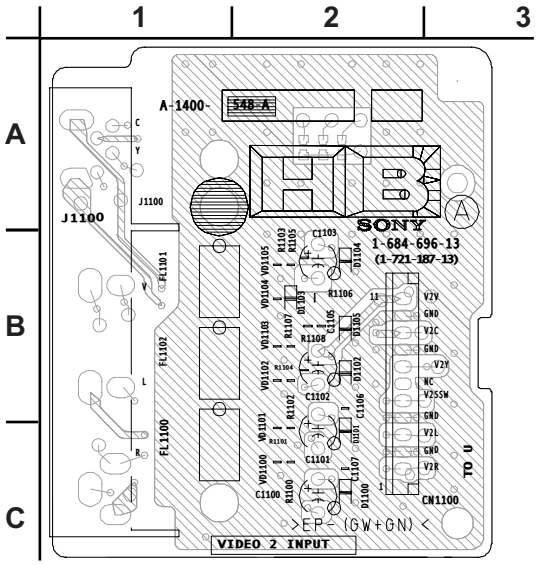


HB BOARD SCHEMATIC DIAGRAM

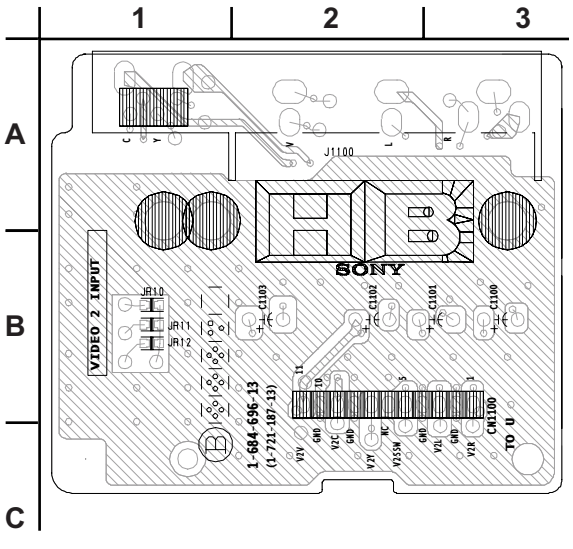


HB [VIDEO-2 INPUT]

COMPONENT SIDE

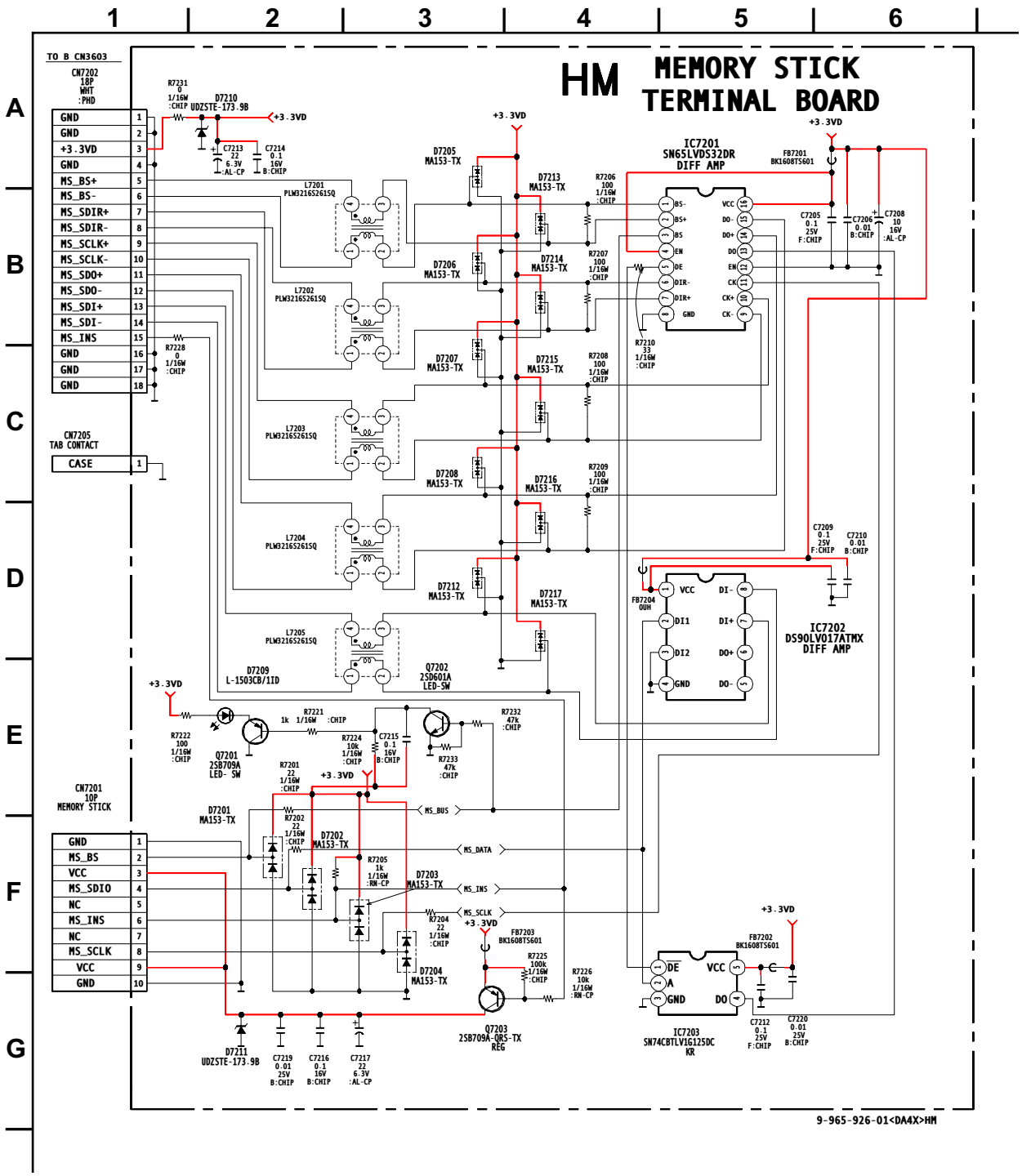


CONDUCTOR SIDE



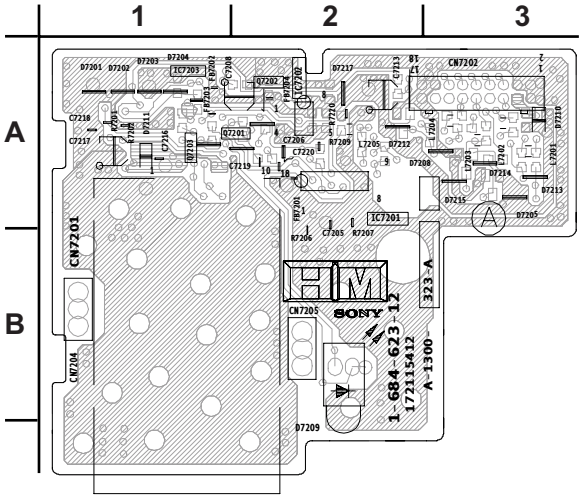
HM BOARD SCHEMATIC DIAGRAM

The HM board is not field repairable. If service is required, use the following part number to order a complete replacement board. A-1300-323-A HM Board, Complete

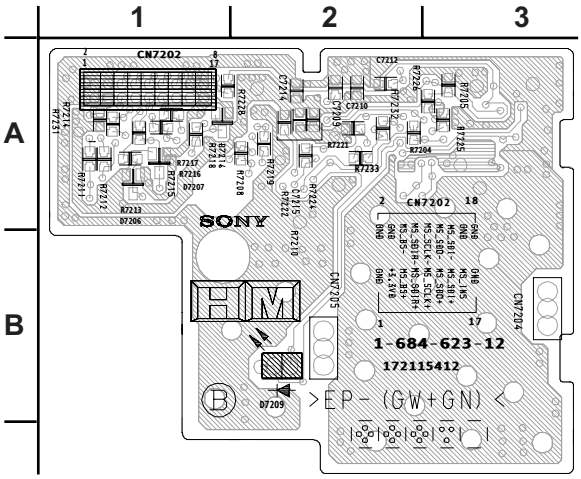


HM [MEMORY STICK, TERMINAL BOARD]

COMPONENT SIDE

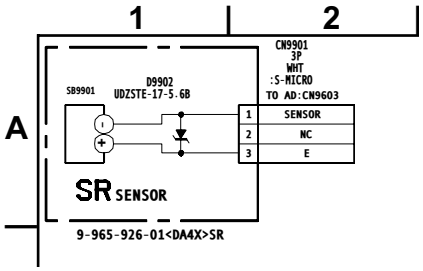


CONDUCTOR SIDE



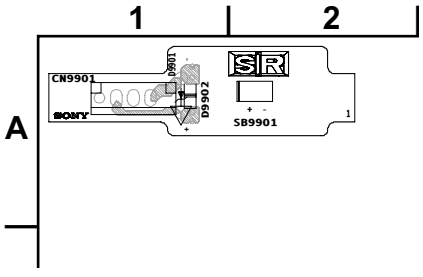
SR BOARD SCHEMATIC DIAGRAM

The SR board is not field repairable. If service is required, use the following part number to order a complete replacement board. A-1400-759-A SR Board, Complete

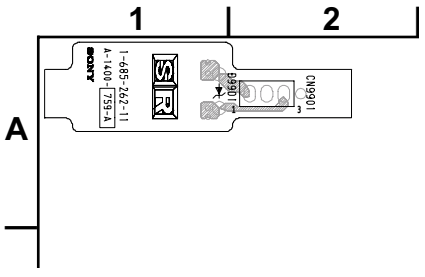


SR [SENSOR]

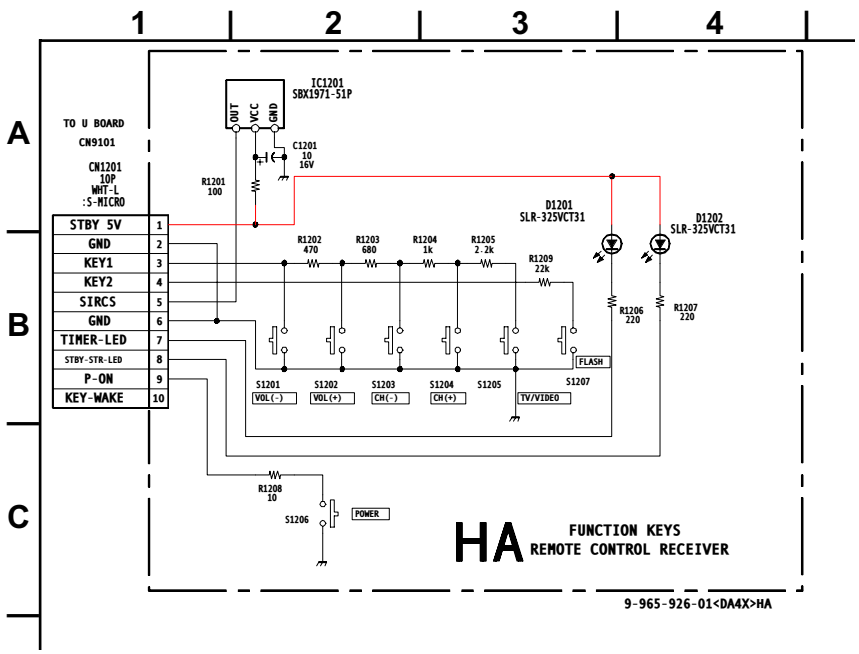
COMPONENT SIDE



CONDUCTOR SIDE



HA BOARD SCHEMATIC DIAGRAM



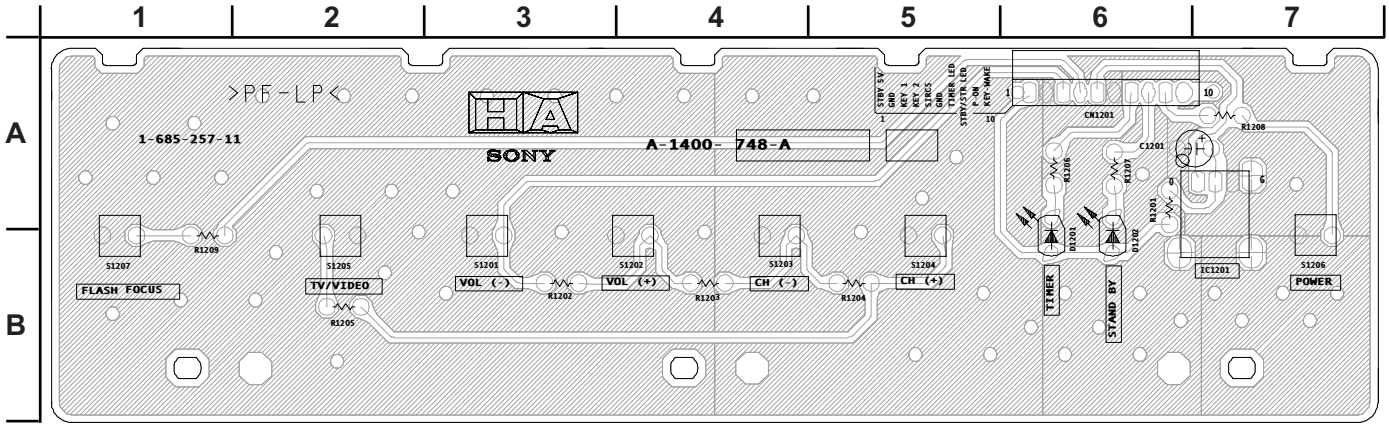
HA BOARD IC VOLTAGE TABLE

IC12001	
PIN	VOLT
1	5.0
2	5.0
3	GND

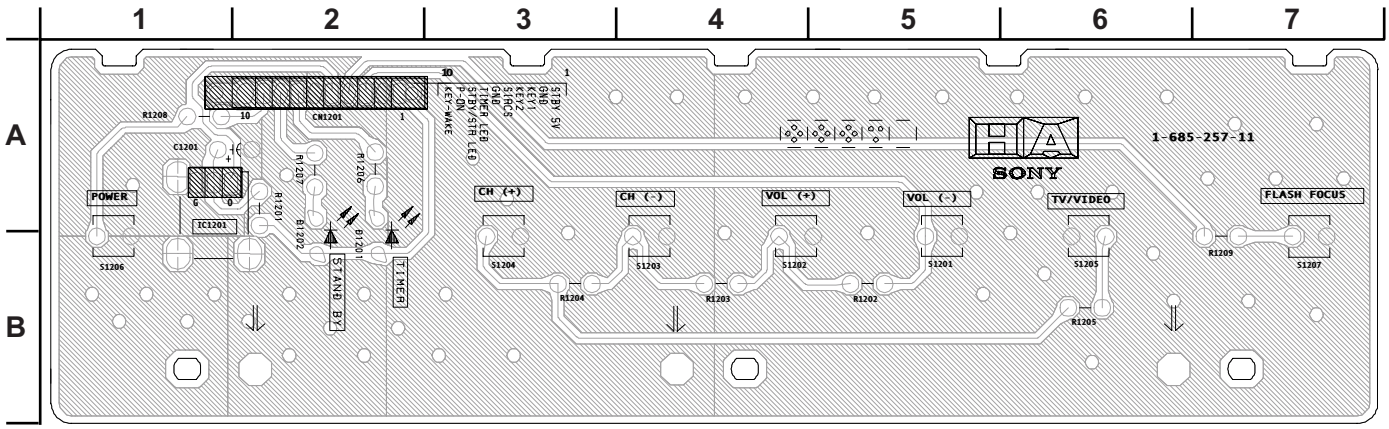
All voltages are in V.

HA [FUNCTION KEYS, REMOTE CONTROL RECEIVER]

COMPONENT SIDE

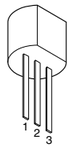


CONDUCTOR SIDE

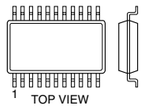


5-5. SEMICONDUCTORS

AN77L12-TA
NJM78L12A-T3
NJM79L05A
NJM79L05A-T3

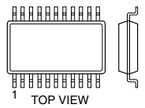


BA9759F-E2



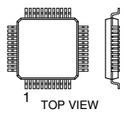
18pin SOP

CD0031AM



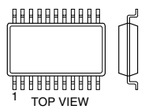
48pin SOP

CM0017AF



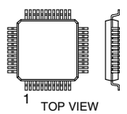
100pin QFP

CXA1726AM
CXA1726AM-T6



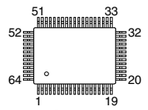
30pin SOP

CXA2103Q
CXA2151Q

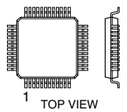


48pin QFP

CXA2069Q
CXA2150AQ

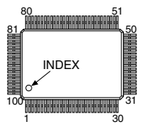


CXD2073Q-T4

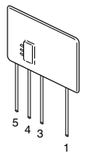


32pin QFP

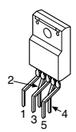
CXP961064-001Q
M306V2ME-154FP
µPD64082GF-3BA



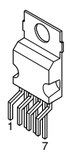
DM-58



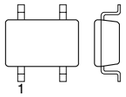
LA6500-FA
LA6500P-FA



LA78045
TDA2052

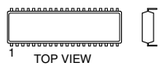


MAX4450EUK-TG069



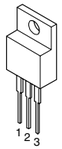
5pin CHIP

MCZ3001D

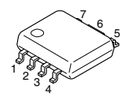


18pin DIP

MC7805CT
MC7812CT
NJM7805FA
NJM7812FA
PQ09RF21
TA7805S
TA7812S



MM1476AF(TP)

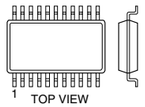


MSM514265C-60JS
µPD424210LE-60-E2



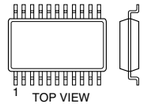
40pin DIP

M24C04-WMN6T(A)
M24C32-WMN6T(A)
NJM2068V-TE2
NJM2521M(TE2)
NJM2903M
NJM2903M-TE2
NJM2904M
NJM2904M(TE2)
NJM4558M-T2
NJM4558M-TE2
NJM4558V-TE2
µPC4558G2



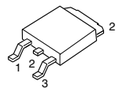
8pin SOP

M52055FP
TC74HCT157AF
TC74HCT157AF(EL)
TC74LVX157FT(EL)

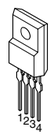


16pin SOP

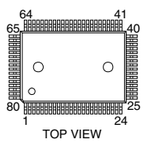
NJM2391DL1-33-TEI



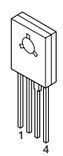
NJM2395AF05
NJM2395F09



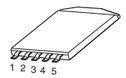
NJW1106FC2



PQ30RV11



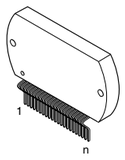
PST9143NL



SBX1971-51P

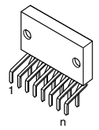


STK392-560



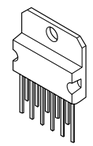
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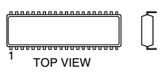


n=13pin

TDA7265

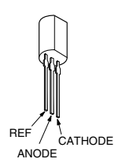


TDA7312

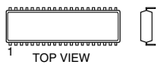


30pin DIP

µPC1093J-1-T

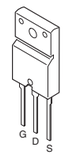


µPC393C

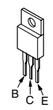


8pin DIP

IRFIB7N50A-LF31



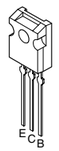
1MB12-140-F153A
2SA2005
2SC4634LS-CB11
2SC5511



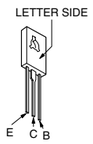
2SA1037AK-T146-QR
2SA1037AK-T146-R
2SA1226
2SA1226-T1E3E4
2SB709A-QRS-TX
2SC1623-L5L6
2SC2412K-T-146-QR
2SD601A-Q
2SD601A-QRS-TX



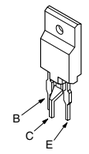
2SA1358-Y
2SC3421-Y



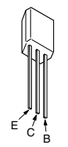
2SC2688(5)-LK



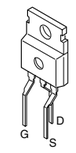
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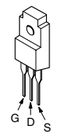
2SD2144S-TP-V
2SD2144S-V



2SJ585LS-CC11



2SK2876-01MR-F122



2SK3018-T106

DAN202K
DAN202K-T-146

DAP202K
DAP202K-T-146

DTZ10B
MA111-TX
UDZ-TE-17- 8.2B
UDZ-TE-17-7.5B
UDZS-TE17-12B
UDZS-TE17-22B
UDZS-TE17-33B
UDZSTE-1710B
UDZSTE-1720B
UDZSTE-175.1B
UDZSTE-175.6B
UDZSTE-177.5B
UDZSTE-178.2B
1SS355TE-17

D1NL20U
D1NL20U-TA2
D2L20U
D2L20U-TA
EL1Z
ERA22-08
ERA22-08TP3
GP08D
GP08DPKG23
MTZJ-T-77-18B
MTZJ-T-77-22B
MTZJ-T-77-5.6B
RGP02-17EL-6433
RGP02-17PKG23
RGP10GPKG23
S2L40F
10ERA60-TP
1SS83
1SS83TD

D10SC6M

D10SC6MR

D2L20U-F
ERC04-06SE

D2SB60A-F04
D4SBS4-F
D6SB60LF

D25SC6MF04

D25SC6MRF04

ERD07-15L

FCQ30A04

FMQ-G5FMS
PG124S15

MTZJ-T-77-15B
MTZJ-T-77-20B
MTZJ-T-77-5.1B
RD15ES-B2
RD18ES-B2
RD20ES-B2
RD5.1ESB2
RD5.6ESB2
1SS133T-77

PC123F2
PC123FY2

SLR-325VCT31

SPR-325MVW

SECTION 6: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

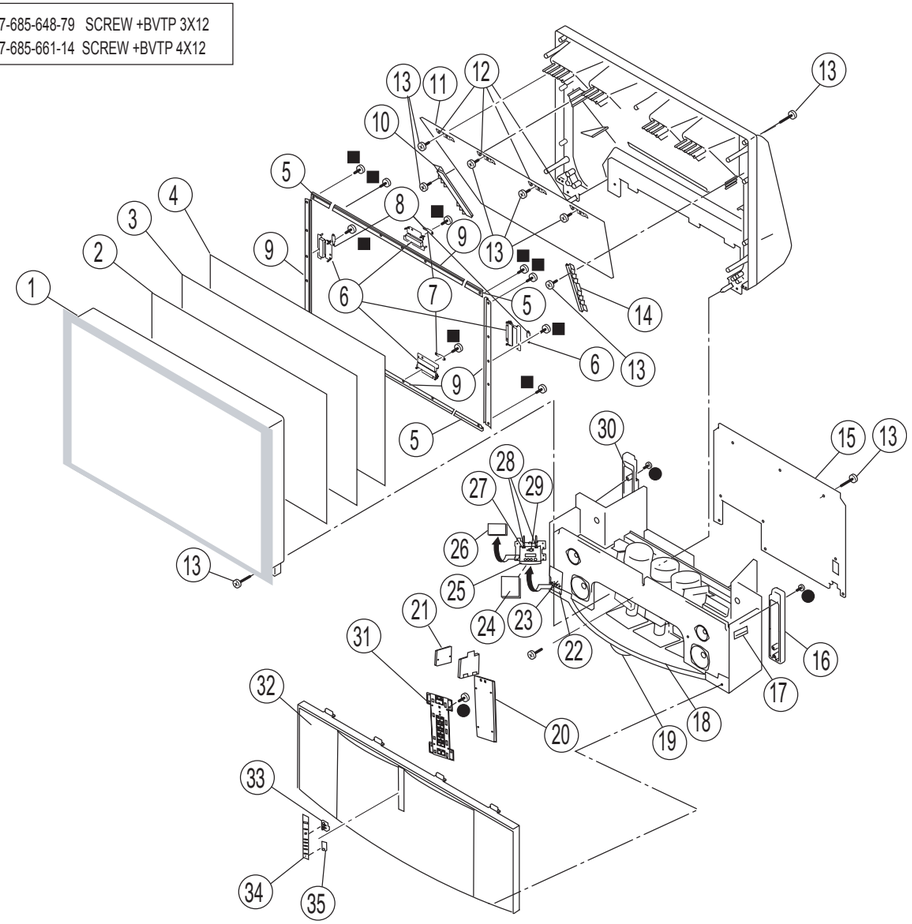
* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-1. COVER (KP-57WV600/57WV700 0NLY)

● 7-685-648-79 SCREW +BVTP 3X12
■ 7-685-661-14 SCREW +BVTP 4X12



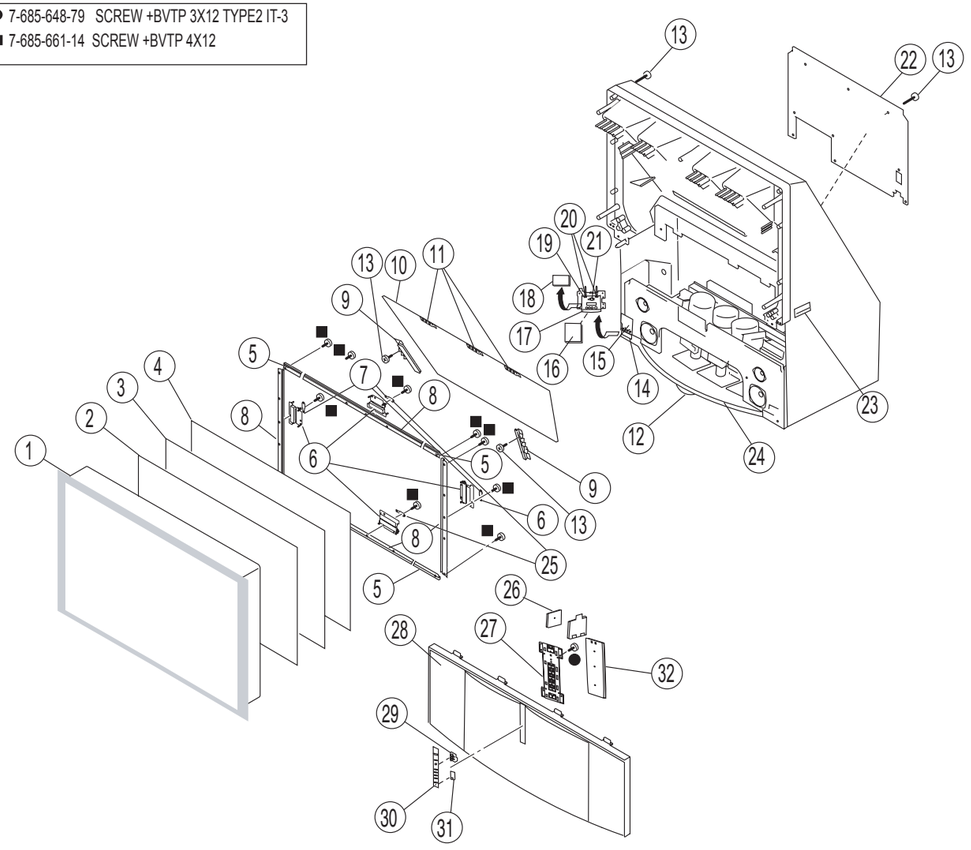
REF.NO.		PART NO.	DESCRIPTION
1		X-4040-450-1	BEZNET ASSY KP-57WV600 ONLY
1		X-4040-448-1	BEZNET ASSY KP-57WV700 ONLY
2		A-1603-725-A	CONTRAST SCREEN ASSY KP-57WV600 ONLY
2		A-1603-723-A	CONTRAST SCREEN ASSY KP-57WV700 ONLY
3		4-088-638-11	PLATE, DIFFUSION (WL) KP-57WV600 ONLY
3		4-088-611-11	PLATE, DIFFUSION (WL) KP-57WV700 ONLY
4		4-088-637-11	PLATE, DIFFUSION (WF) KP-57WV600 ONLY
4		4-088-610-11	PLATE, DIFFUSION (WF) KP-57WV700 ONLY
5	*	4-089-180-01	HOLDER, SCREEN SHORT
6	*	A-1400-759-A	SR MOUNT
7		4-088-460-21	CUSHION, SCREEN
8		4-088-460-31	CUSHION, SCREEN
9	*	4-088-461-01	HOLDER, SCREEN
10	*	4-088-600-01	HOLDER (L), MIRROR
11		4-088-598-01	MIRROR
12	*	4-081-501-01	HOLDER, MIRROR
13		4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20
14	*	4-088-601-01	HOLDER (R), MIRROR
15	*	4-088-115-01	BOARD, REAR KP-57WV600 ONLY
15	*	4-091-605-01	BOARD, REAR KP-57WV700 ONLY
16	*	4-088-630-01	PANEL R, SIDE KP-57WV600 ONLY
16	*	4-088-607-01	PANEL (R), SIDE KP-57WV700 ONLY
17	*	4-088-541-01	HANDLE
18		4-088-631-01	SKIRT, FRONT KP-57WV600 ONLY
18		4-088-603-01	SKIRT, FRONT KP-57WV700 ONLY
19		4-075-020-01	FOOT, PLASTIC
20	*	A-1400-748-A	HA MOUNT
21	*	A-1300-323-A	HM COMPLETE PC BOARD
22		4-088-572-01	LABEL, INPUT TERMINAL
23		4-088-569-01	BRACKET, INPUT TERMINAL
24		4-088-571-01	PLATE, INPUT TERMINAL
25		3-973-975-41	DAMPER, OIL
26	*	A-1400-747-A	HB MOUNT
27		4-088-570-01	COVER, INPUT TERMINAL
28		4-088-573-01	SPRING
29		4-047-464-01	CATCHER, PUSH
30	*	4-088-629-01	PANEL L, SIDE KP-57WV600 ONLY
30	*	4-088-606-01	PANEL (L), SIDE KP-57WV700 ONLY
31		4-088-622-01	BUTTON KP-57WV600 ONLY
31		4-088-585-01	BUTTON KP-57WV700 0NLY
32		X-4040-323-1	GRILLE ASSY, SPEAKER KP-57WV600 ONLY
32		X-4040-326-1	GRILLE ASSY, SPEAKER KP-57WV700 ONLY
33		4-088-588-01	GUIDE, LED
34		4-088-621-01	PANEL, CONTROL KP-57WV600 ONLY
34		4-088-584-01	PANEL, CONTROL KP-57WV700 0NLY
35		4-088-586-01	GUIDE, LED

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-2. COVER (KP-65WV600/65WV700 0NLY)

● 7-685-648-79 SCREW +BVTP 3X12 TYPE2 IT-3
■ 7-685-661-14 SCREW +BVTP 4X12



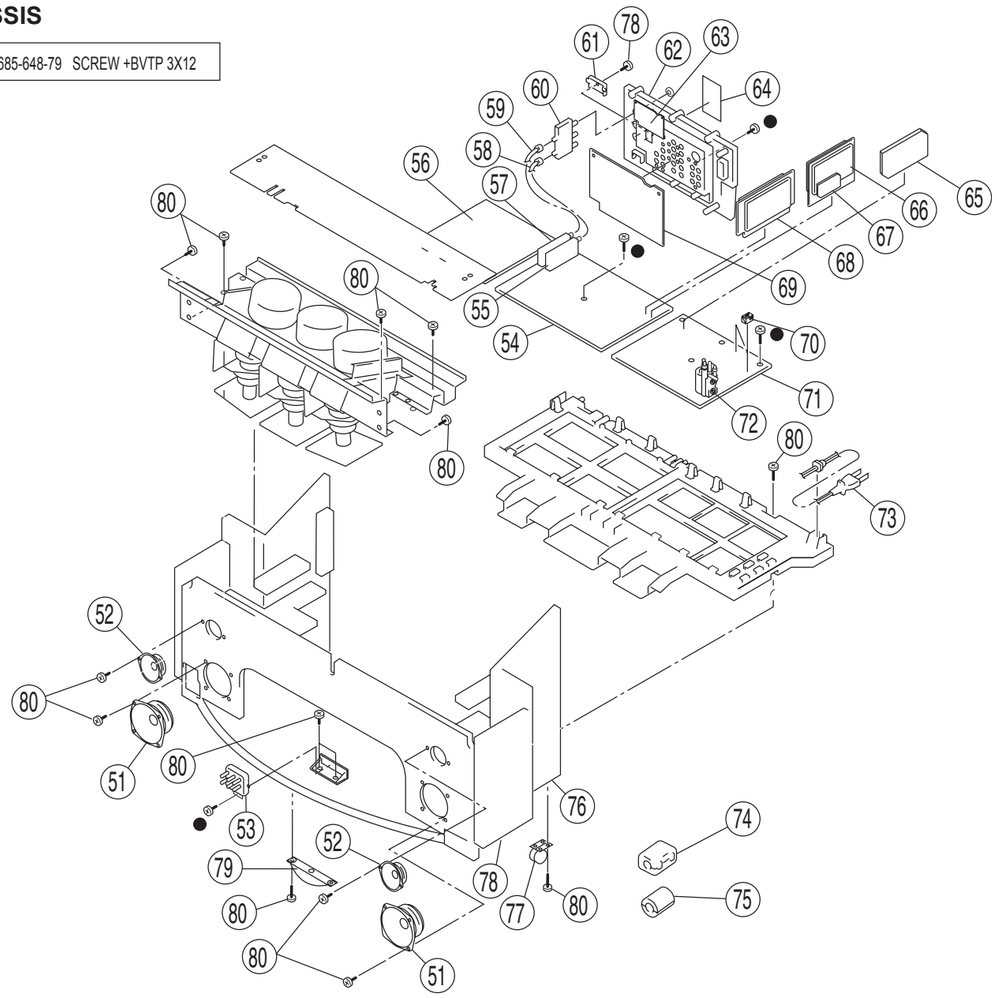
REF.NO.		PART NO.	DESCRIPTION
1		X-4040-449-1	BEZNET ASSY
			KP-65WV600 ONLY
1		X-4040-447-1	BEZNET ASSY
			KP-65WV700 ONLY
2		A-1603-724-A	CONTRAST SCREEN ASSY
			KP-65WV600 ONLY
2		A-1603-722-A	CONTRAST SCREEN ASSY
			KP-65WV700 ONLY
3		4-088-627-11	PLATE, DIFFUSION (WL)
			KP-65WV600 ONLY
3		4-088-594-11	PLATE, DIFFUSION (WL)
			KP-65WV700 ONLY
4		4-088-626-11	PLATE, DIFFUSION (WF)
			KP-65WV600 ONLY
4		4-088-596-11	PLATE, DIFFUSION (WF)
			KP-65WV700 ONLY
5	*	4-089-179-01	HOLDER, SCREEN SHORT
6	*	A-1400-759-A	SR MOUNT
7		4-088-460-11	CUSHION, SCREEN
8	*	4-088-461-01	HOLDER, SCREEN
9		4-088-579-01	HOLDER, MIRROR SLIDE
10	*	4-088-577-01	MIRROR
11	*	4-088-580-01	HOLDER, MIRROR BASE
12		4-075-020-01	FOOT, PLASTIC
13		4-081-063-01	SCREW, DOME WASHER HEX TAP 4 X 20
14		4-088-572-01	LABEL, INPUT TERMINAL
15		4-088-569-01	BRACKET, INPUT TERMINAL
16		4-088-571-01	PLATE, INPUT TERMINAL
17		3-973-975-41	DAMPER, OIL
18	*	A-1400-747-A	HB MOUNT
19		4-088-570-01	COVER, INPUT TERMINAL
20		4-088-573-01	SPRING
21		4-047-464-01	CATCHER, PUSH
22	*	4-088-575-01	BOARD, REAR
23	*	4-088-541-01	HANDLE
24		4-088-620-01	SKIRT, FRONT
			KP-65WV600 ONLY
24		4-088-574-01	SKIRT, FRONT
			KP-65WV700 ONLY
25		4-088-460-01	CUSHION, SCREEN
26	*	A-1300-323-A	HM COMPLETE PC BOARD
27		4-088-622-01	BUTTON
			KP-65WV600 ONLY
27		4-088-585-01	BUTTON
			KP-65WV700 0NLY
28		X-4040-321-1	GRILLE ASSY, SPEAKER
			KP-65WV600 ONLY
28		X-4040-325-1	GRILLE ASSY, SPEAKER
			KP-65WV700 ONLY
29		4-088-588-01	GUIDE, LED
30		4-088-621-01	PANEL, CONTROL
			KP-65WV600 ONLY
30		4-088-584-01	PANEL, CONTROL
			KP-65WV700 0NLY
31		4-088-586-01	GUIDE, LED
32	*	A-1400-748-A	HA MOUNT

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-3. CHASSIS

● 7-685-648-79 SCREW +BVTP 3X12



REF.NO.		PART NO.	DESCRIPTION
51		1-825-191-11	LOUDSPEAKER (13 CM)
52		1-825-200-11	LOUDSPEAKER (6.6 CM)
⚠ 53		1-223-925-81	RESISTOR ASSY (HIGH-VOLTAGE)
54	*	A-1300-406-A	A COMPLETE
55		8-598-593-50	TUNER, FSS BTF-WA421
56	*	A-1300-410-A	G COMPLETE
57		8-598-594-30	TUNER, FSS BTF-FA421
58	*	1-555-400-00	CABLE, PIN
59	*	1-557-056-31	CABLE, P-P
⚠ 60		1-771-787-13	SWITCH, RF ANTENNA
61		4-069-675-01	CAP, TERMINAL BOARD
62		4-088-590-01	BOARD, TERMINAL
63	*	A-1300-324-A	UD COMPLETE PC BOARD
64		4-088-591-01	LABEL, TERMINAL
65	*	A-1300-411-A	AD COMPLETE
66	*	A-1300-407-A	B COMPLETE
67	*	A-1300-408-A	MS1 COMPLETE
68	*	A-1300-646-A	M COMPLETE PC BOARD
69	*	A-1300-321-A	U COMPLETE PC BOARD

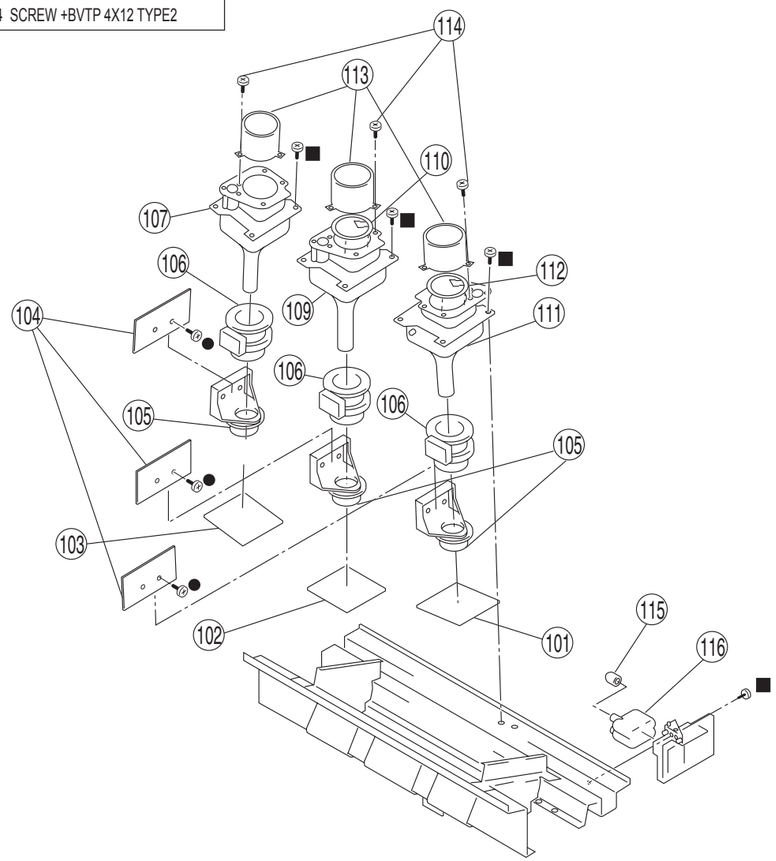
REF.NO.		PART NO.	DESCRIPTION
70		3-710-578-01	COVER, VOLUME, 6 MOLD
71	*	A-1300-560-A	D COMPLETE The high-voltage leads associated with the FBT on this board are not included and must be ordered separately.
⚠ 72		1-453-285-51	FBT ASSY, NX-4006//X4P4
⚠		1-779-095-51	LEAD ASSY, HIGH-VOLTAGE
⚠		1-900-260-40	CONNECTOR ASSY, MV
⚠ 73		1-769-837-11	CORD, POWER(WITH NOISE FILTER)
74		1-500-082-11	CLAMP, FERRITE
75		1-469-241-11	CORE, FERRITE
76		X-4040-459-1	CABINET ASSY KP-65WV600 ONLY
76		X-4040-320-1	CABINET ASSY KP-65WV700 ONLY
77		3-184-556-01	CASTER
78		4-030-850-01	SOCKET, CASTER
79		4-075-020-01	FOOT, PLASTIC
80		4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20 KP-57WV600/57WV700 ONLY

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-4. PICTURE TUBE

● 7-685-648-79 SCREW +BVTP 3X12 TYPE2 IT-3
■ 7-685-661-14 SCREW +BVTP 4X12 TYPE2



REF.NO.		PART NO.	DESCRIPTION
101		A-1401-420-A	CB MOUNT (VAR) KP-57WV600/57WV700 ONLY
101		A-1401-387-A	CB MOUNT (VAR) KP-65WV600/65WV700 ONLY
102		A-1401-419-A	CG MOUNT (VAR) KP-57WV600/57WV700 ONLY
102		A-1401-386-A	CG MOUNT (VAR) KP-65WV600/65WV700 ONLY
103	*	A-1401-385-A	CR MOUNT (VAR)
104	*	A-1401-589-A	VM MOUNT (VAR)
⚠ 105		1-452-790-31	NECK ASSY
⚠ 106		1-451-537-22	DEFLECTION YOKE
⚠ 107		8-733-647-15	CR 07MVC41(B)-L(VM) KP-57WV600 ONLY
⚠ 107		8-733-668-15	CR 07MVC42(B)-L KP-57WV700 ONLY
⚠ 107		8-733-665-15	CR 07MVC61(B)-L KP-65WV600 ONLY
⚠ 107		8-733-663-15	CR 07MVC62(B)-L KP-65WV700 ONLY
⚠ 109		8-733-652-15	CR 07MVC21(G)-L(VM) KP-57WV600/65WV600 ONLY
⚠ 109		8-733-667-15	CR 07MVC22(G)-L KP-57WV700/65WV700 ONLY
110		4-088-543-01	SHADE (G) KP-57WV700/65WV700 ONLY
⚠ 111		8-733-648-15	CR 07MVC41(R)-L(VM) KP-57WV600 ONLY
⚠ 111		8-733-669-15	CR 07MVC42(R)-L KP-57WV700 ONLY
⚠ 111		8-733-666-15	CR 07MVC61(R)-L KP-65WV600 ONLY
⚠ 111		8-733-664-15	CR 07MVC62(R)-L KP-65WV700 ONLY
112		4-088-542-01	SHADE (R) KP-57WV700/65WV700 ONLY
113		4-083-750-01	LENS (DELTA 260) KP-57WV600 ONLY
113		4-087-841-01	LENS (DELTA 265) KP-57WV700/65WV700 ONLY
113		4-087-842-01	LENS (DELTA 270) KP-65WV600 ONLY
114		4-052-894-01	SCREW (4X20), HEAD TAPPING
115		4-373-137-01	CAP (Z), RUBBER
⚠ 116		8-598-955-31	BLOCK ASSY, HV HVB-1031

SECTION 7: ELECTRICAL PARTS LIST

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

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The components in this manual identified by the following symbol: ⋈ indicate parts that have been carefully factory-selected to satisfy regulations regarding X-ray radiation for each set.

Should replacement be required for one of these components, replace only with the value originally used.

*** Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.**

RESISTORS
- **All resistors are in ohms**
- **F : nonflammable**
- **All variable and adjustable resistors have characteristic curve B, unless otherwise noted.**

VM

When ordering parts by reference number, please include the board name.

VM

REF. NO.	PART NO.	DESCRIPTION	VALUES		
*	**A-1401-589-A**	**VM BOARD, MOUNTED (VAR)**			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
	CAPACITOR				
C9001	1-126-933-11	ELECT	100µF	20%	16V
C9002	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9003	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C9004	1-107-645-11	ELECT	22µF	20%	160V
C9006	1-161-830-00	CERAMIC	0.0047µF		500V
C9007	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9008	1-126-964-11	ELECT	10µF	20%	50V
C9009	1-107-636-11	ELECT	10µF	20%	160V
C9010	1-137-528-11	MYLAR	0.1µF	10%	250V
C9011	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C9012	1-137-528-11	MYLAR	0.1µF	10%	250V
C9013	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9014	1-117-450-11	MYLAR	0.47µF	10%	250V
	CONNECTOR				
* CN9001	1-564-508-11	PLUG,CONNECTOR		5P	
* CN9002	1-564-506-11	PLUG,CONNECTOR		3P	
* CN9003	1-770-723-11	CONNECTOR, BOARD TO BOARD		8P	
	FERRITE BEAD				
FB9001	1-469-869-21	FERRITE	0µH		
FB9002	1-469-869-21	FERRITE	0µH		
	TRANSISTOR				
Q9001	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q9002	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q9003	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q9004	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q9005	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q9006	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q9007	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q9008	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q9009	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q9010	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q9011	8-729-045-05	TRANSISTOR 2SA2005			
Q9012	8-729-045-04	TRANSISTOR 2SC5511			
	RESISTOR				
R9001	1-249-381-11	CARBON	1	5%	1/4W
R9002	1-216-820-11	RES-CHIP	820	5%	1/10W
R9003	1-216-819-11	RES-CHIP	680	5%	1/10W
R9004	1-216-834-11	RES-CHIP	12K	5%	1/10W
R9005	1-216-839-11	RES-CHIP	33K	5%	1/10W
R9006	1-216-811-11	RES-CHIP	150	5%	1/10W
R9008	1-216-815-11	RES-CHIP	330	5%	1/10W
R9009	1-216-813-11	RES-CHIP	220	5%	1/10W
R9010	1-216-813-11	RES-CHIP	220	5%	1/10W
R9011	1-249-391-11	CARBON	6.8	5%	1/4W
R9012	1-249-391-11	CARBON	6.8	5%	1/4W
R9013	1-249-391-11	CARBON	6.8	5%	1/4W
R9014	1-249-391-11	CARBON	6.8	5%	1/4W
R9015	1-249-391-11	CARBON	6.8	5%	1/4W
R9016	1-249-391-11	CARBON	6.8	5%	1/4W
R9017	1-249-391-11	CARBON	6.8	5%	1/4W
R9018	1-249-391-11	CARBON	6.8	5%	1/4W
R9019	1-216-848-11	RES-CHIP	180K	5%	1/10W
R9020	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R9021	1-216-805-11	RES-CHIP	47	5%	1/10W
R9022	1-216-805-11	RES-CHIP	47	5%	1/10W
R9023	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R9024	1-216-848-11	RES-CHIP	180K	5%	1/10W
R9025	1-215-890-11	METAL OXIDE	470	5%	2W
R9026	1-216-847-11	RES-CHIP	150K	5%	1/10W
R9027	1-216-847-11	RES-CHIP	150K	5%	1/10W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

CR

CR

REF. NO.	PART NO.	DESCRIPTION	VALUES		
*	**A-1401-385-A**	**CR BOARD, MOUNTED (VAR)**			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
	CAPACITOR				
C9101	1-104-570-11	CERAMIC	0.001µF	10%	2KV
C9102	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C9103	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9105	1-107-962-11	ELECT	22µF	20%	250V
C9106	1-161-830-00	CERAMIC	0.0047µF		500V
C9107	1-101-003-00	CERAMIC	0.0047µF		50V
C9108	1-126-935-11	ELECT	470µF	20%	16V
C9110	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9111	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9112	1-126-933-11	ELECT	100µF	20%	16V
C9114	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C9115	1-101-003-00	CERAMIC	0.0047µF		50V
C9117	1-164-156-11	CERAMIC CHIP	0.1µF		25V
	CONNECTOR				
* CN9101	1-564-511-11	PLUG,CONNECTOR	8P		
* CN9102	1-564-507-11	PLUG,CONNECTOR	4P		
* CN9103	1-564-508-11	PLUG,CONNECTOR	5P		
CN9104	1-695-915-11	TAB (CONTACT)			
CN9107	1-785-879-11	CONNECTOR, ONE TOUCH			
CN9110	1-695-915-11	TAB (CONTACT)			
	DIODE				
D9101	8-719-901-83	DIODE 1SS83TD			
D9104	8-719-901-83	DIODE 1SS83TD			
D9109	8-719-404-50	DIODE MA111-TX			
	FERRITE BEAD				
FB9101	1-410-397-21	FERRITE	1.1µH		
	IC				
IC9101	8-759-680-01	IC TDA6120Q/N2/S1			
	JACK				
⚠ J9101	1-251-182-41	SOCKET, CRT			
	COIL				
L9101	1-414-856-11	INDUCTOR	10µH		
L9102	1-414-855-31	INDUCTOR	1µH		
L9103	1-414-856-11	INDUCTOR	10µH		

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	NEON LAMP				
NL9102	1-517-778-21	LAMP, NEON			
NL9103	1-517-778-21	LAMP, NEON			
	TRANSISTOR				
Q9101	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9102	8-729-028-28	TRANSISTOR 2SK2036(TE85L)			
Q9103	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9104	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9105	8-729-122-63	TRANSISTOR 2SA1226-T1E4			
	RESISTOR				
R9101	1-260-133-11	CARBON	680K	5%	1/2W
R9102	1-249-425-11	CARBON	4.7K	5%	1/4W
R9103	1-216-809-11	RES-CHIP	100	5%	1/10W
R9104	1-260-132-11	CARBON	560K	5%	1/2W
R9105	1-218-696-11	METAL CHIP	1.5K	0.50%	1/16W
R9106	1-218-680-11	METAL CHIP	330	0.50%	1/16W
R9107	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R9108	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R9109	1-218-690-11	METAL CHIP	820	0.50%	1/16W
R9114	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9115	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R9116	1-260-328-11	CARBON	1K	5%	1/2W
R9120	1-215-926-00	METAL OXIDE	33K	5%	3W
R9121	1-260-087-11	CARBON	100	5%	1/2W
R9122	1-260-320-11	CARBON	220	5%	1/2W
R9126	1-218-748-11	METAL CHIP	220K	0.50%	1/16W
R9127	1-218-748-11	METAL CHIP	220K	0.50%	1/16W
R9129	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R9131	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R9132	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9133	1-216-809-11	RES-CHIP	100	5%	1/10W
R9134	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9135	1-260-087-11	CARBON	100	5%	1/2W
R9136	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9137	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
	SPARK GAP				
SG9101	1-517-729-31	GAP, SPARK			
SG9102	1-519-422-11	GAP, SPARK			

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CG

CG

REF. NO.	PART NO.	DESCRIPTION	VALUES		
*	A-1401-386-A	CG BOARD, MOUNTED (VAR) (KV-65WV600/65WV700 ONLY)			
*	A-1401-419-A	CG BOARD, MOUNTED (VAR) (KV-57WV600/57WV700 ONLY)			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		CAPACITOR			
C9201	1-107-662-11	ELECT	22µF	20%	250V
C9202	1-104-570-11	CERAMIC	0.001µF	10%	2KV
C9203	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9204	1-126-935-11	ELECT	470µF	20%	16V
C9205	1-164-378-11	CERAMIC CHIP	30pF	5%	50V
C9207	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9208	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9209	1-101-003-00	CERAMIC	0.0047µF		50V
C9211	1-126-933-11	ELECT	100µF	20%	16V
C9213	1-161-830-00	CERAMIC	0.0047µF		500V
C9214	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C9216	1-101-003-00	CERAMIC	0.0047µF		50V
C9217	1-164-156-11	CERAMIC CHIP	0.1µF		25V
		CONNECTOR			
* CN9201	1-564-511-11	PLUG,CONNECTOR	8P		
* CN9202	1-564-511-11	PLUG,CONNECTOR	8P		
* CN9203	1-564-507-11	PLUG,CONNECTOR	4P		
* CN9204	1-564-507-11	PLUG,CONNECTOR	4P		
* CN9205	1-564-506-11	PLUG,CONNECTOR	3P		
* CN9206	1-564-509-11	PLUG,CONNECTOR	6P		
CN9208	1-695-915-11	TAB (CONTACT)			
CN9209	1-785-879-11	CONNECTOR, ONE TOUCH			
CN9210	1-695-915-11	TAB (CONTACT)			
		DIODE			
D9201	8-719-901-83	DIODE 1SS83TD			
D9206	8-719-901-83	DIODE 1SS83TD			
D9209	8-719-404-50	DIODE MA111-TX			
		FERRITE BEAD			
FB9201	1-410-397-21	FERRITE	1.1µH		
		IC			
IC9201	8-759-680-01	IC TDA6120Q/N2/S1			
		JACK			
⚠ J9201	1-251-182-41	SOCKET, CRT			

REF. NO.	PART NO.	DESCRIPTION	VALUES		
		COIL			
L9201	1-414-856-11	INDUCTOR	10µH		
L9202	1-414-855-31	INDUCTOR	1µH		
L9203	1-414-856-11	INDUCTOR	10µH		
		NEON LAMP			
NL9202	1-517-778-21	LAMP, NEON			
NL9203	1-517-778-21	LAMP, NEON			
		TRANSISTOR			
Q9201	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9202	8-729-028-28	TRANSISTOR 2SK2036(TE85L)			
Q9203	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9204	8-729-122-63	TRANSISTOR 2SA1226-T1E4			
		RESISTOR			
R9201	1-260-133-11	CARBON	680K	5%	1/2W
R9202	1-260-132-11	CARBON	560K	5%	1/2W
R9203	1-249-425-11	CARBON	4.7K	5%	1/4W
R9204	1-216-809-11	RES-CHIP	100	5%	1/10W
R9205	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R9206	1-218-677-11 (KP-65WV600/65WV700 ONLY)	METAL CHIP	240	0.50%	1/16W
R9206	1-218-679-11 (KP-57WV600/57WV700 ONLY)	METAL CHIP	300	0.50%	1/16W
R9207	1-218-694-11	METAL CHIP	1.2K	0.50%	1/16W
R9208	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R9209	1-218-690-11	METAL CHIP	820	0.50%	1/16W
R9216	1-218-699-11	METAL CHIP	2K	0.50%	1/16W
R9217	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R9220	1-215-926-00	METAL OXIDE	33K	5%	3W
R9221	1-260-328-11	CARBON	1K	5%	1/2W
R9222	1-260-087-11	CARBON	100	5%	1/2W
R9223	1-260-320-11	CARBON	220	5%	1/2W
R9225	1-218-744-11	METAL CHIP	150K	0.50%	1/16W
R9226	1-218-744-11	METAL CHIP	150K	0.50%	1/16W
R9228	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R9230	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R9231	1-260-087-11	CARBON	100	5%	1/2W
R9232	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9233	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
		SPARK GAP			
SG9201	1-517-729-31	GAP, SPARK			
SG9202	1-519-422-11	GAP, SPARK			

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

CB

CB

REF. NO.	PART NO.	DESCRIPTION	VALUES		
*	A-1401-387-A	CB BOARD, MOUNTED (VAR) (KV-65WV600/65WV700 ONLY)			
*	A-1401-420-A	CB BOARD, MOUNTED (VAR) (KV-57WV600/57WV700 ONLY)			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
	CAPACITOR				
C9301	1-104-570-11	CERAMIC	0.001µF	10%	2KV
C9302	1-101-003-00	CERAMIC	0.0047µF		50V
C9303	1-107-662-11	ELECT	22µF	20%	250V
C9304	1-162-920-11	CERAMIC CHIP	27pF	5%	50V
C9305	1-162-916-11	CERAMIC CHIP	12pF	5%	50V
C9306	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9307	1-126-935-11	ELECT	470µF	20%	16V
C9309	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9310	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9311	1-126-933-11	ELECT	100µF	20%	16V
C9312	1-161-830-00	CERAMIC	0.0047µF		500V
C9313	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9314	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C9315	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C9316	1-101-003-00	CERAMIC	0.0047µF		50V
C9318	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9320	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
	CONNECTOR				
* CN9301	1-564-510-11	PLUG,CONNECTOR	7P		
* CN9302	1-564-511-11	PLUG,CONNECTOR	8P		
* CN9303	1-564-507-11	PLUG,CONNECTOR	4P		
CN9304	1-695-915-11	TAB (CONTACT)			
CN9308	1-785-879-11	CONNECTOR, ONE TOUCH			
* CN9309	1-564-507-11	PLUG,CONNECTOR	4P		
CN9310	1-695-915-11	TAB (CONTACT)			
	DIODE				
D9301	8-719-404-50	DIODE MA111-TX			
D9302	8-719-901-83	DIODE 1SS83TD			
D9303	8-719-404-50	DIODE MA111-TX			
D9309	8-719-901-83	DIODE 1SS83TD			
D9310	8-719-404-50	DIODE MA111-TX			
	FERRITE BEAD				
FB9301	1-410-397-21	FERRITE	1.1µH		

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	IC				
IC9301	8-759-680-01	IC TDA6120Q/N2/S1			
	JACK				
⚠ J9301	1-251-182-41	SOCKET, CRT			
	COIL				
L9301	1-414-856-11	INDUCTOR	10µH		
L9302	1-414-855-31	INDUCTOR	1µH		
L9303	1-414-856-11	INDUCTOR	10µH		
	NEON LAMP				
NL9302	1-517-778-21	LAMP, NEON			
NL9303	1-517-778-21	LAMP, NEON			
	TRANSISTOR				
Q9301	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q9302	8-729-028-28	TRANSISTOR 2SK2036(TE85L)			
Q9303	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9304	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9305	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9306	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9307	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9308	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9309	8-729-122-63	TRANSISTOR 2SA1226-T1E4			
	RESISTOR				
R9301	1-216-809-11	RES-CHIP	100	5%	1/10W
R9302	1-218-680-11	METAL CHIP	330	0.50%	1/16W
R9303	1-260-133-11	CARBON	680K	5%	1/2W
R9304	1-260-132-11	CARBON	560K	5%	1/2W
R9306	1-218-682-11	METAL CHIP (KP-65WV600/65WV700 ONLY)	390	0.50%	1/16W
R9306	1-218-684-11	METAL CHIP (KP-57WV600/57WV700 ONLY)	470	0.50%	1/16W
R9307	1-218-696-11	METAL CHIP	1.5K	0.50%	1/16W
R9308	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R9309	1-218-698-11	METAL CHIP	1.8K	0.50%	1/16W
R9313	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R9314	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R9315	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R9316	1-218-698-11	METAL CHIP	1.8K	0.50%	1/16W
R9317	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W

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CB U

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R9318	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R9319	1-249-425-11	CARBON	4.7K	5%	1/4W
R9320	1-215-926-00	METAL OXIDE	33K	5%	3W
R9323	1-260-328-11	CARBON	1K	5%	1/2W
R9324	1-260-087-11	CARBON	100	5%	1/2W
R9325	1-260-320-11	CARBON	220	5%	1/2W
R9327	1-218-749-11	METAL CHIP	240K	0.50%	1/16W
R9328	1-218-749-11	METAL CHIP	240K	0.50%	1/16W
R9330	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R9332	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R9333	1-218-699-11	METAL CHIP	2K	0.50%	1/16W
R9334	1-216-822-11	RES-CHIP	1.2K	5%	1/10W
⚠ R9335	1-249-393-11	CARBON	10	5%	1/4W
R9336	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9337	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9338	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9339	1-260-087-11	CARBON	100	5%	1/2W
R9340	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9341	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9342	1-216-834-11	RES-CHIP	12K	5%	1/10W
R9343	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9344	1-216-845-11	RES-CHIP	100K	5%	1/10W
R9345	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R9346	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9347	1-216-809-11	RES-CHIP	100	5%	1/10W
R9348	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9349	1-216-805-11	RES-CHIP	47	5%	1/10W
R9350	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9351	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W

SPARK GAP

SG9301	1-517-729-31	GAP, SPARK			
SG9302	1-519-422-11	GAP, SPARK			

U

* **A-1300-321-A U BOARD, COMPLETE**

CAPACITOR

C1501	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C1502	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1503	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C1504	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C1505	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1506	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C1507	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C1508	1-126-960-11	ELECT	1µF	20%	50V
C1509	1-126-960-11	ELECT	1µF	20%	50V
C1510	1-126-960-11	ELECT	1µF	20%	50V
C1511	1-126-960-11	ELECT	1µF	20%	50V
C1512	1-126-960-11	ELECT	1µF	20%	50V
C1513	1-126-960-11	ELECT	1µF	20%	50V
C1519	1-162-913-11	CERAMIC CHIP	8pF	0.50pF	50V
C1520	1-162-913-11	CERAMIC CHIP	8pF	0.50pF	50V
C1521	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C1522	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C1523	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1524	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C1525	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1526	1-126-964-11	ELECT	10µF	20%	50V
C1527	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1528	1-126-933-11	ELECT	100µF	20%	16V
C1529	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C1530	1-126-964-11	ELECT	10µF	20%	50V
C1531	1-126-941-11	ELECT	470µF	20%	25V
C1532	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1533	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C1534	1-126-933-11	ELECT	100µF	20%	16V
C1535	1-126-933-11	ELECT	100µF	20%	16V
C1536	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1537	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1538	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1539	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1540	1-126-933-11	ELECT	100µF	20%	16V
C1541	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C1542	1-126-960-11	ELECT	1µF	20%	50V
C1544	1-126-960-11	ELECT	1µF	20%	50V
C1545	1-126-933-11	ELECT	100µF	20%	16V
C1546	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C1548	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C1550	1-126-960-11	ELECT	1µF	20%	50V
C1551	1-126-960-11	ELECT	1µF	20%	50V
C1552	1-126-960-11	ELECT	1µF	20%	50V
C1553	1-126-960-11	ELECT	1µF	20%	50V
C1554	1-126-960-11	ELECT	1µF	20%	50V
C1555	1-126-960-11	ELECT	1µF	20%	50V
C1556	1-126-933-11	ELECT	100µF	20%	16V
C1557	1-164-156-11	CERAMIC CHIP	0.1µF		25V

REF. NO.	PART NO.	DESCRIPTION	VALUES
C1558	1-126-933-11	ELECT	100µF 20% 16V
C1559	1-126-933-11	ELECT	100µF 20% 16V
C1560	1-126-933-11	ELECT	100µF 20% 16V
C1561	1-126-933-11	ELECT	100µF 20% 16V
C1562	1-126-933-11	ELECT	100µF 20% 16V
C1563	1-126-933-11	ELECT	100µF 20% 16V
	CONNECTOR		
CN1501	1-764-334-11	PLUG,CONNECTOR	11P
CN1502	1-793-173-11	PIN, PCCONNECTOR(PC BOARD)	50P
CN1503	1-793-419-11	CONNECTOR, BOARD TO BOARD	4P
	DIODE		
D1501	8-719-977-28	DIODE UDZSTE-1710B	
D1502	8-719-977-28	DIODE UDZSTE-1710B	
D1503	8-719-977-28	DIODE UDZSTE-1710B	
D1504	8-719-977-28	DIODE UDZSTE-1710B	
D1505	8-719-977-28	DIODE UDZSTE-1710B	
D1506	8-719-977-28	DIODE UDZSTE-1710B	
D1507	8-719-977-28	DIODE UDZSTE-1710B	
D1508	8-719-977-28	DIODE UDZSTE-1710B	
D1509	8-719-977-28	DIODE UDZSTE-1710B	
D1510	8-719-977-28	DIODE UDZSTE-1710B	
D1511	8-719-977-28	DIODE UDZSTE-1710B	
D1512	8-719-977-28	DIODE UDZSTE-1710B	
D1513	8-719-977-28	DIODE UDZSTE-1710B	
D1514	8-719-977-28	DIODE UDZSTE-1710B	
D1515	8-719-977-28	DIODE UDZSTE-1710B	
D1516	8-719-977-28	DIODE UDZSTE-1710B	
D1517	8-719-977-28	DIODE UDZSTE-1710B	
D1518	8-719-914-43	DIODE DAN202K-T-146	
D1519	8-719-977-28	DIODE UDZSTE-1710B	
D1520	8-719-977-28	DIODE UDZSTE-1710B	
D1521	8-719-977-28	DIODE UDZSTE-1710B	
D1522	8-719-977-28	DIODE UDZSTE-1710B	
D1523	8-719-977-28	DIODE UDZSTE-1710B	
D1524	8-719-977-28	DIODE UDZSTE-1710B	
D1525	8-719-977-28	DIODE UDZSTE-1710B	
D1526	8-719-977-28	DIODE UDZSTE-1710B	
D1527	8-719-069-61	DIODE UDZSTE-1710B	
D1528	8-719-069-61	DIODE UDZSTE-1710B	
D1529	8-719-069-61	DIODE UDZSTE-1710B	
D1530	8-719-069-61	DIODE UDZSTE-1710B	

REF. NO.	PART NO.	DESCRIPTION	VALUES
D1531	8-719-069-61	DIODE UDZSTE-1710B	
D1532	8-719-069-61	DIODE UDZSTE-1710B	
D1533	8-719-977-28	DIODE UDZSTE-1710B	
D1534	8-719-977-28	DIODE UDZSTE-1710B	
D1535	8-719-977-28	DIODE UDZSTE-1710B	
	IC		
IC1502	8-752-080-04	IC CXA2069Q	
IC1505	8-759-548-56	IC M52055FP	
	JACK		
J1501	1-573-967-12	BLOCK, (S) TERMINAL	
J1502	1-750-516-21	JACK BLOCK, PIN	2P
J1503	1-750-517-21	JACK BLOCK, PIN	3P
J1504	1-750-517-21	JACK BLOCK, PIN	3P
J1505	1-764-143-11	JACK	
J1506	1-764-143-11	JACK	
J1507	1-750-516-21	JACKBLOCK, PIN	2P
J1508	1-774-358-11	JACK BLOCK, PIN	
J1509	1-774-358-11	JACK BLOCK, PIN	
	COIL		
L1502	1-469-555-21	INDUCTOR	10µH
L1503	1-469-555-21	INDUCTOR	10µH
L1504	1-469-555-21	INDUCTOR	10µH
L1505	1-469-555-21	INDUCTOR	10µH
L1506	1-469-555-21	INDUCTOR	10µH
	TRANSISTOR		
Q1501	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q1502	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q1503	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q1504	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q1505	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q1506	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q1507	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q1508	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q1509	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q1510	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q1511	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q1512	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q1513	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q1515	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q1516	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	

REF. NO.	PART NO.	DESCRIPTION	VALUES		
Q1518	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q1519	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q1520	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q1521	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q1522	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q1523	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q1524	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
	RESISTOR				
R1501	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1502	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1503	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R1504	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R1505	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R1506	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1507	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1508	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R1509	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R1510	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R1511	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1512	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1513	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R1514	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1520	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R1521	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R1522	1-216-824-11	RES-CHIP	1.8K	5%	1/10W
R1523	1-216-824-11	RES-CHIP	1.8K	5%	1/10W
R1524	1-216-809-11	RES-CHIP	100	5%	1/10W
R1525	1-216-809-11	RES-CHIP	100	5%	1/10W
R1526	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1527	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1530	1-216-809-11	RES-CHIP	100	5%	1/10W
R1531	1-216-809-11	RES-CHIP	100	5%	1/10W
R1532	1-216-809-11	RES-CHIP	100	5%	1/10W
R1533	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R1534	1-216-833-11	RES-CHIP	10K	5%	1/10W
R1535	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1536	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1537	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1538	1-216-806-11	RES-CHIP	56	5%	1/10W
R1539	1-216-805-11	RES-CHIP	47	5%	1/10W
R1540	1-216-809-11	RES-CHIP	100	5%	1/10W
R1541	1-216-809-11	RES-CHIP	100	5%	1/10W
R1542	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1543	1-216-809-11	RES-CHIP	100	5%	1/10W
R1544	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1545	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1546	1-216-809-11	RES-CHIP	100	5%	1/10W
R1547	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1548	1-216-841-11	RES-CHIP	47K	5%	1/10W
R1549	1-216-809-11	RES-CHIP	100	5%	1/10W
R1550	1-216-809-11	RES-CHIP	100	5%	1/10W
R1551	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1552	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1554	1-216-809-11	RES-CHIP	100	5%	1/10W
R1555	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1556	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1557	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1558	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1559	1-218-665-11	METAL CHIP	75	0.50%	1/16W
R1560	1-216-845-11	RES-CHIP	100K	5%	1/10W
R1562	1-216-809-11	RES-CHIP	100	5%	1/10W
R1563	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1565	1-216-809-11	RES-CHIP	100	5%	1/10W
R1566	1-216-809-11	RES-CHIP	100	5%	1/10W
R1567	1-216-833-11	RES-CHIP	10K	5%	1/10W
R1568	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1569	1-216-809-11	RES-CHIP	100	5%	1/10W
R1570	1-216-809-11	RES-CHIP	100	5%	1/10W
R1571	1-216-809-11	RES-CHIP	100	5%	1/10W
R1572	1-216-809-11	RES-CHIP	100	5%	1/10W
R1573	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1574	1-216-809-11	RES-CHIP	100	5%	1/10W
R1575	1-216-809-11	RES-CHIP	100	5%	1/10W
R1576	1-216-833-11	RES-CHIP	10K	5%	1/10W
R1577	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1578	1-216-857-11	RES-CHIP	1M	5%	1/10W
R1579	1-216-842-11	RES-CHIP	56K	5%	1/10W
R1580	1-216-809-11	RES-CHIP	100	5%	1/10W
R1581	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1582	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R1583	1-216-809-11	RES-CHIP	100	5%	1/10W
R1584	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1585	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1586	1-216-813-11	RES-CHIP	220	5%	1/10W
R1587	1-216-809-11	RES-CHIP	100	5%	1/10W
R1588	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1589	1-216-813-11	RES-CHIP	220	5%	1/10W

U UD

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R1590	1-216-809-11	RES-CHIP	100	5%	1/10W
R1591	1-216-813-11	RES-CHIP	220	5%	1/10W
R1592	1-216-833-11	RES-CHIP	10K	5%	1/10W
R1593	1-216-809-11	RES-CHIP	100	5%	1/10W
R1594	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1595	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1596	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1597	1-216-809-11	RES-CHIP	100	5%	1/10W
R1598	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R1600	1-216-809-11	RES-CHIP	100	5%	1/10W
R1604	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R1607	1-216-845-11	RES-CHIP	100K	5%	1/10W
R1608	1-216-849-11	RES-CHIP	220K	5%	1/10W
R1609	1-216-833-11	RES-CHIP	10K	5%	1/10W
R1610	1-216-849-11	RES-CHIP	220K	5%	1/10W
R1612	1-216-849-11	RES-CHIP	220K	5%	1/10W
R1613	1-216-845-11	RES-CHIP	100K	5%	1/10W
R1615	1-216-841-11	RES-CHIP	47K	5%	1/10W
R1616	1-216-833-11	RES-CHIP	10K	5%	1/10W
R1617	1-216-845-11	RES-CHIP	100K	5%	1/10W
R1618	1-216-864-11	SHORT CHIP	0		
R1619	1-216-809-11	RES-CHIP	100	5%	1/10W
R1620	1-216-809-11	RES-CHIP	100	5%	1/10W
R1621	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1622	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1623	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1624	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1625	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1626	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1627	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1628	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1629	1-216-853-11	RES-CHIP	470K	5%	1/10W
R1630	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1631	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1632	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1635	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1636	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1637	1-216-821-11	RES-CHIP	1K	5%	1/10W
R1645	1-216-809-11	RES-CHIP	100	5%	1/10W
R1646	1-216-864-11	SHORT CHIP	0		
R1647	1-216-864-11	SHORT CHIP	0		
R1648	1-216-864-11	SHORT CHIP	0		
R1649	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1650	1-218-676-11	METAL CHIP	220	0.50%	1/16W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R1651	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1652	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1653	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1654	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1655	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1656	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1657	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1658	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1659	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R1660	1-218-676-11	METAL CHIP	220	0.50%	1/16W

VARISTOR

VD1516	1-803-974-21	VARISTOR, CHIP			

UD

The UD board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

*	**A-1300-324-A**	**UD BOARD, COMPLETE**			

CAPACITOR

C7001	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7002	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C7004	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7005	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7006	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7007	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C7008	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7010	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7011	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7012	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7013	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7014	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7015	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7016	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7017	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7018	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C7019	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C7020	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C7021	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7022	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V

UD

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C7023	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7024	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7025	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7026	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7027	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7028	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7029	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7030	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7031	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7032	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7033	1-124-779-00	ELECT CHIP	10µF	20%	16V
C7034	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7035	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7036	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7037	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7038	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7039	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7040	1-162-921-11	CERAMIC CHIP	33pF	5%	50V
C7041	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7042	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7043	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7044	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7045	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7046	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7047	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7048	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7049	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7050	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7051	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7052	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7053	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7056	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7057	1-162-921-11	CERAMIC CHIP	33pF	5%	50V
C7058	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7059	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7060	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7061	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7062	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7064	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7065	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7066	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7067	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7068	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7069	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V

REF. NO.	PART NO.	DESCRIPTION	VALUES	
C7070	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C7071	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C7078	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C7079	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C7080	1-164-156-11	CERAMIC CHIP	0.1µF	25V

CONNECTOR

*	CN7001	1-816-228-21	CONNECTOR, DIV	
*	CN7002	1-564-526-11	PLUG,CONNECTOR	11P
*	CN7004	1-564-519-11	PLUG,CONNECTOR	4P

DIODE

D7001	8-719-914-43	DIODE DAN202K-T-146	
D7002	8-719-069-55	DIODE UDZSTE-175.6B	
D7003	8-719-069-55	DIODE UDZSTE-175.6B	
D7004	8-719-069-55	DIODE UDZSTE-175.6B	
D7006	8-719-069-55	DIODE UDZSTE-175.6B	

FERRITE BEAD

FB7001	1-414-760-21	FERRITE	0µH
FB7002	1-414-760-21	FERRITE	0µH
FB7003	1-414-760-21	FERRITE	0µH
FB7004	1-414-760-21	FERRITE	0µH

FILTER

FL7001	1-400-087-21	FILTER, EMI REMOVAL	(SMD)
FL7002	1-234-560-21	FILTER, LOW PASS	
FL7003	1-234-559-21	FILTER, LOW PASS	
FL7004	1-234-559-21	FILTER, LOW PASS	

IC

IC7001	8-759-640-39	IC BR24C02F-WE2
IC7002	8-749-015-18	IC PQ07VZ012ZP
IC7003	8-749-015-18	IC PQ07VZ012ZP
IC7004	6-702-080-01	IC GM7030-H
IC7005	6-801-520-01	IC ST72631K4M1
IC7006	8-759-641-86	IC BR24C16F-E2
IC7007	6-702-170-01	IC PACDN006S
IC7008	6-702-170-01	IC PACDN006S
IC7009	6-702-170-01	IC PACDN006S

COIL

L7001	1-412-058-11	INDUCTOR	10µH
L7002	1-412-058-11	INDUCTOR	10µH

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

UD A

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	RESISTOR				
R7003	1-216-821-11	RES-CHIP	1K	5%	1/10W
R7004	1-218-852-11	RES-CHIP	1.6K	5%	1/10W
R7007	1-216-821-11	RES-CHIP	1K	5%	1/10W
R7012	1-216-821-11	RES-CHIP	1K	5%	1/10W
R7013	1-216-821-11	RES-CHIP	1K	5%	1/10W
R7014	1-216-821-11	RES-CHIP	1K	5%	1/10W
R7015	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7016	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7020	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7021	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7023	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7024	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7025	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7026	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7029	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R7030	1-216-864-11	SHORT CHIP	0		
R7032	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R7034	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R7036	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R7037	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R7041	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7043	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R7044	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R7045	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7047	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7051	1-216-864-11	SHORT CHIP	0		
R7053	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7054	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7056	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7057	1-216-864-11	SHORT CHIP	0		
R7058	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7059	1-216-864-11	SHORT CHIP	0		
R7060	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7061	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7062	1-216-864-11	SHORT CHIP	0		
R7065	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7066	1-218-694-11	METAL CHIP	1.2K	0.50%	1/16W
R7067	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7068	1-216-801-11	RES-CHIP	22	5%	1/10W
R7069	1-216-801-11	RES-CHIP	22	5%	1/10W
R7071	1-216-803-11	RES-CHIP	33	5%	1/10W
R7072	1-216-803-11	RES-CHIP	33	5%	1/10W
R7075	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R7080	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R7087	1-218-680-11	METAL CHIP	330	0.50%	1/16W
R7096	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7097	1-216-809-11	RES-CHIP	100	5%	1/10W
R7098	1-216-809-11	RES-CHIP	100	5%	1/10W
R7099	1-216-809-11	RES-CHIP	100	5%	1/10W
R7101	1-216-864-11	SHORT CHIP	0		
R7106	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7108	1-216-805-11	RES-CHIP	47	5%	1/10W
R7109	1-216-805-11	RES-CHIP	47	5%	1/10W
R7111	1-216-864-11	SHORT CHIP	0		
R7112	1-216-864-11	SHORT CHIP	0		
R7113	1-216-864-11	SHORT CHIP	0		
R7114	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R7115	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R7116	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R7117	1-218-668-11	METAL CHIP	100	0.50%	1/16W
R7119	1-218-668-11	METAL CHIP	100	0.50%	1/16W
R7121	1-216-864-11	SHORT CHIP	0		
R7123	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R7124	1-218-680-11	METAL CHIP	330	0.50%	1/16W
R7125	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R7126	1-216-864-11	SHORT CHIP	0		
	CRYSTAL				
X7001	1-795-568-21	VIBRATOR, CRYSTAL			
X7002	1-795-567-21	VIBRATOR, CRYSTAL			

A

*	**A-1300-406-A**	**A BOARD, COMPLETE**	
*	4-374-846-11	COVER,CAPACITOR, CAP TYPE	
	4-382-854-01	SCREW (M3X8), P, SW (+)	
	CAPACITOR		
⚠ C503	1-136-311-11	MYLAR	0.47µF 20% 125V
⚠ C505	1-117-700-41	CERAMIC	0.0022µF 20% 250V
C506	1-126-971-11	ELECT	470µF 20% 50V
C507	1-126-943-11	ELECT	2200µF 20% 25V
⚠ C508	1-117-700-41	CERAMIC	0.0022µF 20% 250V
C510	1-107-826-11	CERAMIC CHIP	0.1µF 10% 16V
C511	1-126-967-11	ELECT	47µF 20% 50V
C513	1-126-961-11	ELECT	2.2µF 20% 50V

A

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C515	1-126-947-11	ELECT	47µF	20%	25V
C516	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C517	1-104-665-11	ELECT	100µF	20%	25V
C518	1-126-967-11	ELECT	47µF	20%	50V
C519	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C520	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C521	1-104-665-11	ELECT	100µF	20%	25V
C522	1-126-964-11	ELECT	10µF	20%	50V
C523	1-104-665-11	ELECT	100µF	20%	25V
C524	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C525	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C526	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C527	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C528	1-126-933-11	ELECT	100µF	20%	16V
C529	1-126-941-11	ELECT	470µF	20%	25V
C530	1-126-941-11	ELECT	470µF	20%	25V
C535	1-115-156-11	CERAMIC CHIP	1µF		10V
C536	1-126-933-11	ELECT	100µF	20%	16V
C538	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C540	1-126-767-11	ELECT	1000µF	20%	16V
C541	1-162-961-11	CERAMIC CHIP	330pF	10%	50V
C542	1-126-941-11	ELECT	470µF	20%	25V
C547	1-126-767-11	ELECT	1000µF	20%	16V
C548	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C549	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C550	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C551	1-126-933-11	ELECT	100µF	20%	16V
C553	1-126-767-11	ELECT	1000µF	20%	16V
C554	1-126-933-11	ELECT	100µF	20%	16V
C555	1-126-933-11	ELECT	100µF	20%	16V
C556	1-126-767-11	ELECT	1000µF	20%	16V
C558	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C559	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C560	1-126-935-11	ELECT	470µF	20%	16V
C561	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C562	1-126-964-11	ELECT	10µF	20%	50V
C563	1-126-947-11	ELECT	47µF	20%	25V
C564	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C565	1-115-156-11	CERAMIC CHIP	1µF		10V
C566	1-162-961-11	CERAMIC CHIP	330pF	10%	50V
C567	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C569	1-126-767-11	ELECT	1000µF	20%	16V
C572	1-104-665-11	ELECT	100µF	20%	25V
C574	1-126-960-11	ELECT	1µF	20%	50V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C577	1-126-960-11	ELECT	1µF	20%	50V
C578	1-126-964-11	ELECT	10µF	20%	50V
C579	1-126-964-11	ELECT	10µF	20%	50V
C580	1-126-964-11	ELECT	10µF	20%	50V
C583	1-126-960-11	ELECT	1µF	20%	50V
C584	1-126-960-11	ELECT	1µF	20%	50V
C585	1-126-960-11	ELECT	1µF	20%	50V
C591	1-126-969-11	ELECT	220µF	20%	50V
C593	1-126-969-11	ELECT	220µF	20%	50V
C595	1-126-969-11	ELECT	220µF	20%	50V
C597	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C598	1-130-495-00	MYLAR	0.1µF	5%	50V
C599	1-126-974-11	ELECT	3300µF	20%	50V
C601	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C607	1-130-495-00	MYLAR	0.1µF	5%	50V
C611	1-130-495-00	MYLAR	0.1µF	5%	50V
C612	1-128-550-11	ELECT	2200µF	20%	50V
C613	1-128-550-11	ELECT	2200µF	20%	50V
C901	1-126-939-11	ELECT	10000µF	20%	16V
C902	1-126-947-11	ELECT	47µF	20%	25V

CONNECTOR

	REF. NO.	PART NO.	DESCRIPTION	
	CN501	1-695-915-11	TAB (CONTACT)	
	CN502	1-695-915-11	TAB (CONTACT)	
	CN503	1-580-843-11	PIN,CONNECTOR (POWER)	
	CN507	1-764-812-11	CONNECTOR, BOARD TO BOARD	11P
*	CN508	1-779-892-11	CONNECTOR, BOARD TO BOARD	10P
*	CN509	1-779-892-11	CONNECTOR, BOARD TO BOARD	10P
	CN510	1-793-494-11	CONNECTOR, BOARD TO BOARD	40P
*	CN511	1-564-509-11	PLUG,CONNECTOR	6P
*	CN514	1-766-240-11	PIN,CONNECTOR (PC BOARD)	2P
	CN515	1-695-915-11	TAB (CONTACT)	
	CN516	1-695-915-11	TAB (CONTACT)	
	CN517	1-695-915-11	TAB (CONTACT)	
	CN518	1-695-915-11	TAB (CONTACT)	
	CN519	1-695-915-11	TAB (CONTACT)	
	CN520	1-695-915-11	TAB (CONTACT)	
*	CN521	1-564-511-11	PLUG,CONNECTOR	8P
*	CN524	1-564-515-11	PLUG,CONNECTOR	12P
*	CN526	1-564-508-11	PLUG,CONNECTOR	5P
*	CN527	1-564-511-61	PLUG,CONNECTOR	8P
*	CN528	1-564-507-11	PLUG,CONNECTOR	4P
*	CN900	1-564-508-11	PLUG,CONNECTOR	5P
*	CN901	1-564-507-11	PLUG,CONNECTOR	4P

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REF. NO.	PART NO.	DESCRIPTION	VALUES
	DIODE		
D503	8-719-511-40	DIODE S1VB20	
D504	8-719-991-33	DIODE 1SS133T-77	
D505	8-719-991-33	DIODE 1SS133T-77	
D508	8-719-991-33	DIODE 1SS133T-77	
D509	8-719-991-33	DIODE 1SS133T-77	
D510	8-719-991-33	DIODE 1SS133T-77	
D511	8-719-991-33	DIODE 1SS133T-77	
D515	8-719-991-33	DIODE 1SS133T-77	
D516	8-719-991-33	DIODE 1SS133T-77	
D517	8-719-991-33	DIODE 1SS133T-77	
D519	8-719-991-33	DIODE 1SS133T-77	
D520	8-719-991-33	DIODE 1SS133T-77	
D521	8-719-991-33	DIODE 1SS133T-77	
D522	8-719-991-33	DIODE 1SS133T-77	
D524	8-719-991-33	DIODE 1SS133T-77	
D526	8-719-991-33	DIODE 1SS133T-77	
D528	8-719-109-85	DIODE MTZJ-T-77-5.1B	
D529	8-719-991-33	DIODE 1SS133T-77	
D530	8-719-924-13	DIODE MTZJ-T-77-22B	
D531	8-719-924-13	DIODE MTZJ-T-77-22B	
D534	8-719-991-33	DIODE 1SS133T-77	
D535	8-719-991-33	DIODE 1SS133T-77	
D540	8-719-991-33	DIODE 1SS133T-77	
D541	8-719-991-33	DIODE 1SS133T-77	
D542	8-719-991-33	DIODE 1SS133T-77	
D543	8-719-991-33	DIODE 1SS133T-77	
D544	8-719-991-33	DIODE 1SS133T-77	
D545	8-719-991-33	DIODE 1SS133T-77	
D546	8-719-991-33	DIODE 1SS133T-77	
D901	8-719-063-70	DIODE D1NL20U-TA2	
	FUSE		
⚠ F501	1-532-506-51	FUSE	6.3A/250V
	FUSE HOLDER		
FH501	1-533-223-11	HOLDER, FUSE	
FH502	1-533-223-11	HOLDER, FUSE	
	IC		
IC501	8-759-450-47	IC BA05T	
IC502	8-759-520-49	IC PQ30RV21	
IC504	6-700-898-01	IC PQ05RD21	
IC505	8-759-653-07	IC PQ09RD21	
IC508	6-702-490-01	IC TA8258H	
IC901	8-759-450-47	IC BA05T	
	CHIP CONDUCTOR		
JR501	1-216-864-11	SHORT CHIP	0
JR502	1-216-864-11	SHORT CHIP	0
JR503	1-216-864-11	SHORT CHIP	0
JR504	1-216-864-11	SHORT CHIP	0
JR505	1-216-864-11	SHORT CHIP	0
JR506	1-216-864-11	SHORT CHIP	0
JR509	1-216-864-11	SHORT CHIP	0
JR510	1-216-864-11	SHORT CHIP	0
JR512	1-216-864-11	SHORT CHIP	0
JR513	1-216-864-11	SHORT CHIP	0
JR514	1-216-864-11	SHORT CHIP	0
JR515	1-216-864-11	SHORT CHIP	0
JR516	1-216-864-11	SHORT CHIP	0
	COIL		
L501	1-469-320-21	INDUCTOR	100µH
L502	1-412-525-31	INDUCTOR	10µH
L503	1-469-320-21	INDUCTOR	100µH
L504	1-469-317-21	INDUCTOR	10µH
L505	1-469-320-21	INDUCTOR	100µH
L506	1-469-320-21	INDUCTOR	100µH
L507	1-469-317-21	INDUCTOR	10µH
L508	1-412-529-11	INDUCTOR	22µH
⚠ L510	1-437-479-11	TRANSFORMER, LINE FILTER	
⚠ L511	1-437-479-11	TRANSFORMER, LINE FILTER	
	IC LINK		
⚠ PS502	1-532-984-11	LINK, IC 2A/90V	
	TRANSISTOR		
Q503	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q504	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q505	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q506	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q507	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q509	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q510	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q511	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q512	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q513	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
Q514	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q517	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q518	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q519	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q520	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q521	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q524	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q527	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q528	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
	RESISTOR				
R501	1-216-864-11	SHORT CHIP	0		
⚠ R508	1-219-776-11	CARBON	2.2M	10%	1/2W
⚠ R509	1-244-270-11	CEMENTED	0.47	5%	20W
⚠ R510	1-244-270-11	CEMENTED	0.47	5%	20W
R511	1-216-849-11	RES-CHIP	220K	5%	1/10W
R512	1-216-849-11	RES-CHIP	220K	5%	1/10W
R513	1-216-833-11	RES-CHIP	10K	5%	1/10W
R515	1-216-833-11	RES-CHIP	10K	5%	1/10W
R516	1-216-857-11	RES-CHIP	1M	5%	1/10W
R517	1-216-805-11	RES-CHIP	47	5%	1/10W
R518	1-216-805-11	RES-CHIP	47	5%	1/10W
R519	1-216-839-11	RES-CHIP	33K	5%	1/10W
R520	1-216-837-11	RES-CHIP	22K	5%	1/10W
R521	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R522	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R523	1-216-837-11	RES-CHIP	22K	5%	1/10W
R524	1-216-833-11	RES-CHIP	10K	5%	1/10W
R525	1-216-833-11	RES-CHIP	10K	5%	1/10W
R526	1-216-837-11	RES-CHIP	22K	5%	1/10W
R527	1-216-343-00	METAL OXIDE	0.33	5%	1W
R528	1-216-833-11	RES-CHIP	10K	5%	1/10W
R529	1-216-857-11	RES-CHIP	1M	5%	1/10W
R530	1-216-847-11	RES-CHIP	150K	5%	1/10W
R531	1-216-821-11	RES-CHIP	1K	5%	1/10W
R532	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R533	1-216-833-11	RES-CHIP	10K	5%	1/10W
R534	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R535	1-218-722-11	METAL CHIP	18K	0.50%	1/16W
R537	1-218-750-11	METAL CHIP	270K	0.50%	1/16W
R538	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R540	1-216-821-11	RES-CHIP	1K	5%	1/10W
R541	1-216-833-11	RES-CHIP	10K	5%	1/10W
R542	1-216-821-11	RES-CHIP	1K	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R543	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R544	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R545	1-216-805-11	RES-CHIP	47	5%	1/10W
R546	1-216-805-11	RES-CHIP	47	5%	1/10W
R547	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R548	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R550	1-216-845-11	RES-CHIP	100K	5%	1/10W
R551	1-216-833-11	RES-CHIP	10K	5%	1/10W
R552	1-216-837-11	RES-CHIP	22K	5%	1/10W
R553	1-216-821-11	RES-CHIP	1K	5%	1/10W
R554	1-216-864-11	SHORT CHIP	0		
R555	1-216-833-11	RES-CHIP	10K	5%	1/10W
R556	1-216-839-11	RES-CHIP	33K	5%	1/10W
R557	1-216-821-11	RES-CHIP	1K	5%	1/10W
R558	1-216-857-11	RES-CHIP	1M	5%	1/10W
R559	1-216-847-11	RES-CHIP	150K	5%	1/10W
R560	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R561	1-216-833-11	RES-CHIP	10K	5%	1/10W
R562	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R563	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R564	1-216-847-11	RES-CHIP	150K	5%	1/10W
R565	1-216-821-11	RES-CHIP	1K	5%	1/10W
R570	1-216-833-11	RES-CHIP	10K	5%	1/10W
R571	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R572	1-216-809-11	RES-CHIP	100	5%	1/10W
R573	1-216-847-11	RES-CHIP	150K	5%	1/10W
R574	1-216-809-11	RES-CHIP	100	5%	1/10W
R577	1-216-821-11	RES-CHIP	1K	5%	1/10W
R579	1-216-821-11	RES-CHIP	1K	5%	1/10W
R581	1-216-864-11	SHORT CHIP	0		
R582	1-216-864-11	SHORT CHIP	0		
R585	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R586	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R588	1-216-833-11	RES-CHIP	10K	5%	1/10W
R589	1-216-833-11	RES-CHIP	10K	5%	1/10W
R591	1-216-821-11	RES-CHIP	1K	5%	1/10W
R593	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R595	1-216-821-11	RES-CHIP	1K	5%	1/10W
R596	1-216-833-11	RES-CHIP	10K	5%	1/10W
R598	1-216-833-11	RES-CHIP	10K	5%	1/10W
R599	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R601	1-216-821-11	RES-CHIP	1K	5%	1/10W
R602	1-216-833-11	RES-CHIP	10K	5%	1/10W
R603	1-216-829-11	RES-CHIP	4.7K	5%	1/10W

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A B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R605	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R606	1-216-833-11	RES-CHIP	10K	5%	1/10W
R607	1-216-833-11	RES-CHIP	10K	5%	1/10W
R610	1-216-821-11	RES-CHIP	1K	5%	1/10W
R611	1-216-833-11	RES-CHIP	10K	5%	1/10W
R617	1-249-385-11	CARBON	2.2	5%	1/4W
R622	1-249-385-11	CARBON	2.2	5%	1/4W
R631	1-249-429-11	CARBON	10K	5%	1/4W
R632	1-249-429-11	CARBON	10K	5%	1/4W
R634	1-216-837-11	RES-CHIP	22K	5%	1/10W
R635	1-216-833-11	RES-CHIP	10K	5%	1/10W
R636	1-216-833-11	RES-CHIP	10K	5%	1/10W
R643	1-216-864-11	SHORT CHIP	0		
R645	1-216-864-11	SHORT CHIP	0		
R647	1-216-833-11	RES-CHIP	10K	5%	1/10W
R904	1-216-393-00	METAL OXIDE	2.2	5%	3W
	TRANSFORMER				
⚠ T502	1-437-697-11	TRANSFORMER, STANDBY			
	TUNER				
TU501	8-598-594-30	TUNER, FSS BTF-FA421			
TU502	8-598-593-50	TUNER, FSS BTF-WA421			
	VARISTOR				
⚠ VD501	1-801-074-11	VARISTOR ERZV10D271			

B

The B board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

*	**A-1300-407-A**	**B BOARD, COMPLETE**			
	4-034-937-01	SCREW (M3), TAPPING			
*	4-088-898-01	CARTON			
*	7-322-065-48	RUBBER, SILICONE RTV (KE-3490)			
	CAPACITOR				
C2801	1-117-681-11	ELECT CHIP	100µF	20%	16V
C2802	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2804	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C2805	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2806	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2807	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C2808	1-126-601-11	ELECT CHIP	2.2µF	20%	50V
C2809	1-117-681-11	ELECT CHIP	100µF	20%	16V
C2810	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2811	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2812	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2813	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2814	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2815	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2816	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2817	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2818	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C2819	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2820	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2821	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2822	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2823	1-117-681-11	ELECT CHIP	100µF	20%	16V
C2824	1-117-681-11	ELECT CHIP	100µF	20%	16V
C2825	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C2826	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2827	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2828	1-110-563-11	CERAMIC CHIP	0.068µF	10%	16V
C2829	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C2830	1-128-996-11	ELECT CHIP	4.7µF	20%	50V
C2831	1-117-681-11	ELECT CHIP	100µF	20%	16V
C2833	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C2834	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2835	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2836	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2837	1-117-681-11	ELECT CHIP	100µF	20%	16V
C2840	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2841	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2842	1-117-681-11	ELECT CHIP	100µF	20%	16V
C2843	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2844	1-117-681-11	ELECT CHIP	100µF	20%	16V
C2845	1-117-681-11	ELECT CHIP	100µF	20%	16V
C2846	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2847	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C2849	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C2850	1-117-681-11	ELECT CHIP	100µF	20%	16V
C2851	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2859	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2860	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C2861	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C3004	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3005	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3006	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3008	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3009	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3011	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3012	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3013	1-128-391-11	ELECT CHIP	330µF	20%	6.3V
C3014	1-128-391-11	ELECT CHIP	330µF	20%	6.3V
C3015	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3016	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3017	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C3018	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3019	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3020	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3021	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3023	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C3024	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C3025	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3026	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3027	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3028	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3029	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3030	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3031	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3032	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3033	1-109-982-11	CERAMIC CHIP	1µF	10%	10V
C3034	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3035	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3036	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3037	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3038	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3039	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3040	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3041	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3042	1-128-391-11	ELECT CHIP	330µF	20%	6.3V
C3044	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3046	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3047	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3048	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3049	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3089	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3090	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3095	1-128-391-11	ELECT CHIP	330µF	20%	6.3V
C3096	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3097	1-128-359-11	ELECT CHIP	100µF	20%	10V
C3098	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3101	1-162-925-11	CERAMIC CHIP	68pF	5%	50V
C3102	1-162-925-11	CERAMIC CHIP	68pF	5%	50V
C3103	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3301	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3302	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3303	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3304	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3305	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3307	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3308	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3309	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3313	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3314	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3315	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3316	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3317	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3318	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3319	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3325	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3326	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3329	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3333	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3334	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3335	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3337	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3341	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3343	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3349	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3350	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3351	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3357	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3358	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3359	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3360	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3363	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3364	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3365	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3366	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3367	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3368	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3369	1-164-156-11	CERAMIC CHIP	0.1µF		25V

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REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
C3370	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3465	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3371	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3466	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3372	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3467	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3374	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3468	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3375	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V	C3469	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3376	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3470	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3377	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C3473	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3378	1-126-204-11	ELECT CHIP	47µF	20%	16V	C3474	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3379	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3475	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3401	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3476	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3402	1-126-394-11	ELECT CHIP	10µF	20%	16V	C3477	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3403	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3478	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3404	1-126-206-11	ELECT CHIP	100µF	20%	6.3V	C3479	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3405	1-126-206-11	ELECT CHIP	100µF	20%	6.3V	C3480	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3406	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C3481	1-117-681-11	ELECT CHIP	100µF	20%	16V
C3407	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C3482	1-117-681-11	ELECT CHIP	100µF	20%	16V
C3408	1-126-206-11	ELECT CHIP	100µF	20%	6.3V	C3483	1-117-681-11	ELECT CHIP	100µF	20%	16V
C3409	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3484	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C3410	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3485	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3411	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3486	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3412	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3487	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3413	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3488	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3414	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3489	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3417	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3490	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3418	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C3491	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3424	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3492	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3426	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3493	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3428	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C3494	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3431	1-126-204-11	ELECT CHIP	47µF	20%	16V	C3495	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3435	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3496	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3436	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C3499	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3439	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3500	1-117-681-11	ELECT CHIP	100µF	20%	16V
C3440	1-162-916-11	CERAMIC CHIP	12pF	5%	50V	C3501	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3441	1-162-916-11	CERAMIC CHIP	12pF	5%	50V	C3601	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3442	1-124-779-00	ELECT CHIP	10µF	20%	16V	C3602	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3444	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3604	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3446	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C3605	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3449	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C3606	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3450	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3607	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3452	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3608	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3460	1-162-923-11	CERAMIC CHIP	47pF	5%	50V	C3610	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3462	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3611	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3463	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3613	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3464	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C3614	1-164-156-11	CERAMIC CHIP	0.1µF		25V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C3615	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3617	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C3618	1-127-760-11	CERAMIC CHIP	4.7µF	10%	6.3V
C3619	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C3620	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C3622	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3623	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3624	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3626	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3627	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3628	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3629	1-126-394-11	ELECT CHIP	10µF	20%	16V
C3630	1-126-394-11	ELECT CHIP	10µF	20%	16V
C3906	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3912	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C8601	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8602	1-127-692-11	CERAMIC CHIP	10µF	10%	6.3V
C8603	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8604	1-127-692-11	CERAMIC CHIP	10µF	10%	6.3V
C8605	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8606	1-127-692-11	CERAMIC CHIP	10µF	10%	6.3V
C8607	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8608	1-128-934-91	CERAMIC CHIP	0.33µF	20%	10V
C8609	1-162-967-11	CERAMIC CHIP	0.0033µF	10%	50V
C8610	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8611	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8612	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8613	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8615	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8617	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8621	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8622	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8623	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8624	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8625	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8630	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8631	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8632	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8633	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8634	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C8635	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C8636	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8637	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8638	1-128-994-21	ELECT CHIP	47µF	20%	10V
C8639	1-126-204-11	ELECT CHIP	47µF	20%	16V
C8640	1-117-370-11	CERAMIC CHIP	10µF		10V
C8641	1-117-370-11	CERAMIC CHIP	10µF		10V
C8642	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8643	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8644	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8645	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8646	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8647	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8648	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8649	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8650	1-126-204-11	ELECT CHIP	47µF	20%	16V
C8651	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8652	1-128-994-21	ELECT CHIP	47µF	20%	10V
C8653	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8654	1-126-206-11	ELECT CHIP	100µF	20%	6.3V
C8655	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8656	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8657	1-164-156-11	CERAMIC CHIP	0.1µF		25V

CONNECTOR

*	CN2801	1-564-506-11	PLUG,CONNECTOR	3P
*	CN2802	1-564-506-11	PLUG,CONNECTOR	3P
*	CN2803	1-564-508-11	PLUG,CONNECTOR	5P
	CN2805	1-764-334-11	PLUG,CONNECTOR	11P
*	CN2806	1-564-510-11	PLUG,CONNECTOR	7P
*	CN3602	1-793-141-21	PIN,CONNECTOR (PC BOARD)	15P
*	CN3603	1-815-177-12	PIN,CONNECTOR (WITH SHIELD)	22P

DIODE

D2803	8-719-404-50	DIODE MA111-TX
D2806	8-719-069-55	DIODE UDZSTE-175.6B
D2807	8-719-404-50	DIODE MA111-TX
D3001	8-719-404-50	DIODE MA111-TX
D3002	8-719-083-58	DIODE UDZSTE-173.9B
D3089	8-719-800-76	DIODE MA153-TX
D3090	8-719-800-76	DIODE MA153-TX
D3309	8-719-914-43	DIODE DAN202K-T-146
D3310	8-719-914-44	DIODE DAP202K-T-146
D3401	8-719-914-43	DIODE DAN202K-T-146
D3402	8-719-914-44	DIODE DAP202K-T-146
D3403	8-719-978-33	DIODE UDZSTE-176.8B

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
D3404	8-719-404-50	DIODE MA111-TX			
D3601	8-719-800-76	DIODE MA153-TX			
D3603	8-719-083-58	DIODE UDZSTE-173.9B			
	FERRITE BEAD				
FB3001	1-500-451-11	FERRITE	0µH		
FB3002	1-216-864-11	SHORT CHIP	0		
FB3301	1-414-235-22	FERRITE	0µH		
FB3302	1-414-235-22	FERRITE	0µH		
FB3303	1-216-809-11	RES-CHIP	100	5%	1/10W
FB3304	1-469-110-21	FERRITE	0µH		
FB3401	1-414-235-22	FERRITE	0µH		
FB3402	1-414-235-22	FERRITE	0µH		
FB3403	1-216-864-11	SHORT CHIP	0		
FB3601	1-414-228-11	FERRITE	0µH		
FB3602	1-414-228-11	FERRITE	0µH		
FB3603	1-216-864-11	SHORT CHIP	0		
FB3604	1-216-864-11	SHORT CHIP	0		
FB3605	1-216-864-11	SHORT CHIP	0		
FB3606	1-216-864-11	SHORT CHIP	0		
FB3607	1-216-864-11	SHORT CHIP	0		
FB3608	1-469-568-21	FERRITE	0µH		
FB3609	1-414-921-11	FERRITE	0µH		
FB3610	1-414-921-11	FERRITE	0µH		
FB3611	1-414-921-11	FERRITE	0µH		
FB3612	1-414-921-11	FERRITE	0µH		
	FILTER				
FL3001	1-234-177-21	FERRITE	0µH		
FL3002	1-234-177-21	FERRITE	0µH		
FL3301	1-234-558-21	FILTER, LOW PASS			
FL3302	1-234-557-21	FILTER, LOW PASS			
FL3303	1-234-557-21	FILTER, LOW PASS			
FL3401	1-781-923-21	FILTER, LOW PASS (SMD)			
FL3602	1-234-494-21	FILTER, EMI REMOVAL (SMD)			
FL8601	1-234-559-21	FILTER, LOW PASS			
FL8602	1-234-559-21	FILTER, LOW PASS			
FL8603	1-234-560-21	FILTER, LOW PASS			
	IC				
⚠ IC2801	8-752-102-68	IC CXA2170Q			
IC3001	6-700-188-01	IC IS41C16256-35K			
IC3002	8-759-583-47	IC UPC2933T-E1			
IC3003	6-701-892-01	IC TC90A90F(BH,DRY)			
IC3004	8-759-642-22	IC UPC29M05T-E2			
IC3089	8-759-682-41	IC M24C32-WMN6T(A)			
IC3090	6-801-376-01	IC MB94918RpF-G-147-BND			
IC3091	8-759-352-91	IC PST9143NL			
IC3301	8-759-663-74	IC HY57V161610DTC-7TR			
IC3302	6-700-398-01	IC UPC2918T-E1			
IC3303	8-752-410-57	IC CXD2097AQ			
IC3306	8-759-669-78	IC TLC2933IPWR-12			
IC3401	6-700-399-01	IC UPC2925T-E1			
IC3402	8-759-677-37	IC MT48LC2M32B2TG-7			
IC3403	8-759-460-29	IC PST9120NL			
IC3408	8-759-672-57	IC CXD9509AQ			
IC3409	8-759-833-72	IC NJM2870F25-TE2			
IC3410	8-752-409-20	IC CXD2309AQ			
IC3411	8-759-082-57	IC TC7W04FU(TE12R)			
IC3413	6-700-205-01	IC TC74LVX157FT(EL)			
IC3414	8-759-548-56	IC M52055FP			
IC3601	8-759-592-50	IC TC7SZ126FU(TE85R)			
IC3602	8-759-592-49	IC TC7SZ125FU(TE85R)			
IC3603	8-759-639-85	IC SN65LVDS31DR			
IC3604	6-701-762-11	IC DS90LV028ATMX			
IC3605	8-759-698-08	IC SN74CBTLV1G125DCKR			
IC3606	8-759-641-26	IC NJM2391DL1-33(TE1)			
IC3608	8-759-669-75	IC TLC2932IPWR			
IC3609	8-759-828-44	IC NJM2870F33(TE2)			
IC8601	8-752-093-03	IC CXA3506R			
	CHIP CONDUCTOR				
JR3001	1-216-864-11	SHORT CHIP	0		
	COIL				
L2801	1-469-555-21	INDUCTOR	10µH		
L2803	1-469-555-21	INDUCTOR	10µH		
L2804	1-469-555-21	INDUCTOR	10µH		
L2805	1-469-555-21	INDUCTOR	10µH		
L2806	1-469-555-21	INDUCTOR	10µH		
L2807	1-469-555-21	INDUCTOR	10µH		
L2808	1-469-555-21	INDUCTOR	10µH		
L2811	1-469-555-21	INDUCTOR	10µH		
L3001	1-216-295-91	SHORT CHIP	0		
L3002	1-412-026-11	INDUCTOR	1µH		
L3004	1-412-026-11	INDUCTOR	1µH		
L3005	1-412-026-11	INDUCTOR	1µH		
L3007	1-469-555-21	INDUCTOR	10µH		
L3009	1-469-555-21	INDUCTOR	10µH		
L3010	1-469-555-21	INDUCTOR	10µH		

B

REF. NO.	PART NO.	DESCRIPTION	VALUES
L3011	1-469-555-21	INDUCTOR	10µH
L3089	1-414-233-22	FERRITE	0µH
L3102	1-469-552-21	INDUCTOR	3.3µH
L3304	1-469-555-21	INDUCTOR	10µH
L3310	1-469-561-21	INDUCTOR	100µH
L3311	1-469-561-21	INDUCTOR	100µH
L3402	1-412-052-21	INDUCTOR	1µH
L3405	1-469-555-21	INDUCTOR	10µH
L3406	1-469-555-21	INDUCTOR	10µH
L3407	1-469-555-21	INDUCTOR	10µH
L3411	1-412-058-11	INDUCTOR	10µH
L3412	1-469-555-21	INDUCTOR	10µH
L3413	1-469-555-21	INDUCTOR	10µH
L3414	1-469-555-21	INDUCTOR	10µH
L3416	1-469-555-21	INDUCTOR	10µH
L3418	1-469-555-21	INDUCTOR	10µH
L3601	1-419-370-21	INDUCTOR	0µH
L3602	1-419-370-21	INDUCTOR	0µH
L3603	1-419-370-21	INDUCTOR	0µH
L3604	1-419-370-21	INDUCTOR	0µH
L3605	1-419-370-21	INDUCTOR	0µH
L3903	1-412-052-21	INDUCTOR	1µH
L8601	1-469-555-21	INDUCTOR	10µH
L8602	1-469-553-21	INDUCTOR	4.7µH
L8603	1-469-555-21	INDUCTOR	10µH
L8604	1-469-555-21	INDUCTOR	10µH

TRANSISTOR

Q2801	8-729-122-63	TRANSISTOR 2SA1226-T1E4
Q2802	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q2803	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q2804	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q2805	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q2806	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q2807	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q2810	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q2811	8-729-122-63	TRANSISTOR 2SA1226-T1E4
Q2812	8-729-122-63	TRANSISTOR 2SA1226-T1E4
Q2813	8-729-122-63	TRANSISTOR 2SA1226-T1E4
Q2814	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q2815	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q2816	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q2817	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q2822	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q2823	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3003	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3005	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3006	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3007	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3008	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3009	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3089	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q3090	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q3092	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3093	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3302	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3303	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3305	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q3306	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q3307	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3308	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q3309	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3310	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q3311	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3401	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3402	8-729-028-28	TRANSISTOR 2SK2036(TE85L)
Q3404	8-729-028-28	TRANSISTOR 2SK2036(TE85L)
Q3410	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q3411	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q3412	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q3413	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q3414	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q3415	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q3416	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3601	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q3906	8-729-028-28	TRANSISTOR 2SK2036(TE85L)
Q3907	8-729-028-28	TRANSISTOR 2SK2036(TE85L)
Q8601	8-729-102-07	TRANSISTOR 2SC2223-T1F13F14
Q8602	8-729-102-07	TRANSISTOR 2SC2223-T1F13F14
Q8603	8-729-102-07	TRANSISTOR 2SC2223-T1F13F14
Q8604	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q8605	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX
Q8606	8-729-122-63	TRANSISTOR 2SA1226-T1E4
Q8607	8-729-122-63	TRANSISTOR 2SA1226-T1E4
Q8608	8-729-122-63	TRANSISTOR 2SA1226-T1E4
Q8609	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	RESISTOR				
R2801	1-218-867-11	RES-CHIP	6.8K	5%	1/10W
R2803	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2804	1-216-805-11	RES-CHIP	47	5%	1/10W
R2805	1-216-822-11	RES-CHIP	1.2K	5%	1/10W
R2806	1-216-863-11	RES-CHIP	3.3M	5%	1/10W
R2807	1-216-809-11	RES-CHIP	100	5%	1/10W
R2808	1-216-826-11	RES-CHIP	2.7K	5%	1/10W
R2809	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2810	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2811	1-216-809-11	RES-CHIP	100	5%	1/10W
R2812	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R2813	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2814	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2816	1-216-845-11	RES-CHIP	100K	5%	1/10W
R2817	1-216-809-11	RES-CHIP	100	5%	1/10W
R2818	1-216-809-11	RES-CHIP	100	5%	1/10W
R2819	1-216-809-11	RES-CHIP	100	5%	1/10W
R2820	1-216-809-11	RES-CHIP	100	5%	1/10W
R2821	1-216-809-11	RES-CHIP	100	5%	1/10W
R2823	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2824	1-216-809-11	RES-CHIP	100	5%	1/10W
R2825	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2826	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R2827	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2828	1-216-832-11	RES-CHIP	8.2K	5%	1/10W
R2829	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2830	1-216-818-11	RES-CHIP	560	5%	1/10W
R2831	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2832	1-216-809-11	RES-CHIP	100	5%	1/10W
R2833	1-216-809-11	RES-CHIP	100	5%	1/10W
R2834	1-216-809-11	RES-CHIP	100	5%	1/10W
R2835	1-216-809-11	RES-CHIP	100	5%	1/10W
R2836	1-216-809-11	RES-CHIP	100	5%	1/10W
R2837	1-216-809-11	RES-CHIP	100	5%	1/10W
R2838	1-216-809-11	RES-CHIP	100	5%	1/10W
R2839	1-216-809-11	RES-CHIP	100	5%	1/10W
R2840	1-216-809-11	RES-CHIP	100	5%	1/10W
R2841	1-216-809-11	RES-CHIP	100	5%	1/10W
R2842	1-216-809-11	RES-CHIP	100	5%	1/10W
R2843	1-216-809-11	RES-CHIP	100	5%	1/10W
R2844	1-216-826-11	RES-CHIP	2.7K	5%	1/10W
R2845	1-216-809-11	RES-CHIP	100	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2846	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R2847	1-216-809-11	RES-CHIP	100	5%	1/10W
R2848	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2849	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2850	1-216-809-11	RES-CHIP	100	5%	1/10W
R2851	1-216-815-11	RES-CHIP	330	5%	1/10W
R2854	1-216-864-11	SHORT CHIP	0		
R2858	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R2860	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2861	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2862	1-216-809-11	RES-CHIP	100	5%	1/10W
R2863	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R2864	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2865	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2866	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2867	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2868	1-216-809-11	RES-CHIP	100	5%	1/10W
R2869	1-216-809-11	RES-CHIP	100	5%	1/10W
R2870	1-216-809-11	RES-CHIP	100	5%	1/10W
R2871	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2872	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2873	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2874	1-216-864-11	SHORT CHIP	0		
R2875	1-216-864-11	SHORT CHIP	0		
R2876	1-216-864-11	SHORT CHIP	0		
R2878	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2879	1-216-853-11	RES-CHIP	470K	5%	1/10W
R2880	1-216-822-11	RES-CHIP	1.2K	5%	1/10W
R2881	1-216-822-11	RES-CHIP	1.2K	5%	1/10W
R2882	1-216-822-11	RES-CHIP	1.2K	5%	1/10W
R2883	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2884	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2885	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2886	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2887	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2889	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2890	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2891	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2892	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2893	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2894	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2895	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2896	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2897	1-216-825-11	RES-CHIP	2.2K	5%	1/10W

B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2898	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2900	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2901	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2902	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2905	1-216-864-11	SHORT CHIP	0		
R2907	1-216-803-11	RES-CHIP	33	5%	1/10W
R2908	1-216-803-11	RES-CHIP	33	5%	1/10W
R2909	1-216-803-11	RES-CHIP	33	5%	1/10W
R2910	1-216-864-11	SHORT CHIP	0		
R2913	1-216-864-11	SHORT CHIP	0		
R2920	1-216-864-11	SHORT CHIP	0		
R2922	1-216-864-11	SHORT CHIP	0		
R2923	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R2924	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R2925	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R3002	1-216-864-11	SHORT CHIP	0		
R3004	1-216-864-11	SHORT CHIP	0		
R3005	1-216-864-11	SHORT CHIP	0		
R3013	1-216-809-11	RES-CHIP	100	5%	1/10W
R3014	1-216-809-11	RES-CHIP	100	5%	1/10W
R3015	1-216-809-11	RES-CHIP	100	5%	1/10W
R3017	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R3020	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R3021	1-216-809-11	RES-CHIP	100	5%	1/10W
R3022	1-216-809-11	RES-CHIP	100	5%	1/10W
R3023	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3025	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3026	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3029	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3030	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R3031	1-216-809-11	RES-CHIP	100	5%	1/10W
R3035	1-216-809-11	RES-CHIP	100	5%	1/10W
R3036	1-216-809-11	RES-CHIP	100	5%	1/10W
R3037	1-216-809-11	RES-CHIP	100	5%	1/10W
R3038	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R3039	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R3040	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R3045	1-216-809-11	RES-CHIP	100	5%	1/10W
R3047	1-216-864-11	SHORT CHIP	0		
R3049	1-216-859-11	RES-CHIP	1.5M	5%	1/10W
R3050	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3051	1-216-864-11	SHORT CHIP	0		
R3063	1-216-864-11	SHORT CHIP	0		
R3064	1-216-864-11	SHORT CHIP	0		
R3066	1-216-809-11	RES-CHIP	100	5%	1/10W
R3068	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R3069	1-216-820-11	RES-CHIP	820	5%	1/10W
R3070	1-216-864-11	SHORT CHIP	0		
R3071	1-216-821-11	RES-CHIP	1K	5%	1/10W
R3072	1-216-855-11	RES-CHIP	680K	5%	1/10W
R3073	1-216-855-11	RES-CHIP	680K	5%	1/10W
R3074	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R3075	1-216-801-11	RES-CHIP	22	5%	1/10W
R3076	1-216-864-11	SHORT CHIP	0		
R3077	1-216-841-11	RES-CHIP	47K	5%	1/10W
R3078	1-216-815-11	RES-CHIP	330	5%	1/10W
R3079	1-216-815-11	RES-CHIP	330	5%	1/10W
R3089	1-216-864-11	SHORT CHIP	0		
R3091	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R3092	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R3093	1-216-864-11	SHORT CHIP	0		
R3095	1-216-845-11	RES-CHIP	100K	5%	1/10W
R3096	1-216-817-11	RES-CHIP	470	5%	1/10W
R3097	1-216-845-11	RES-CHIP	100K	5%	1/10W
R3098	1-216-805-11	RES-CHIP	47	5%	1/10W
R3099	1-216-805-11	RES-CHIP	47	5%	1/10W
R3102	1-216-809-11	RES-CHIP	100	5%	1/10W
R3103	1-216-809-11	RES-CHIP	100	5%	1/10W
R3104	1-216-809-11	RES-CHIP	100	5%	1/10W
R3105	1-216-809-11	RES-CHIP	100	5%	1/10W
R3107	1-216-864-11	SHORT CHIP	0		
R3108	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3110	1-216-809-11	RES-CHIP	100	5%	1/10W
R3111	1-216-809-11	RES-CHIP	100	5%	1/10W
R3116	1-216-797-11	RES-CHIP	10	5%	1/10W
R3117	1-216-797-11	RES-CHIP	10	5%	1/10W
R3150	1-216-864-11	SHORT CHIP	0		
R3302	1-216-817-11	RES-CHIP	470	5%	1/10W
R3303	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R3304	1-216-809-11	RES-CHIP	100	5%	1/10W
R3325	1-216-864-11	SHORT CHIP	0		
R3335	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3341	1-216-813-11	RES-CHIP	220	5%	1/10W
R3342	1-218-705-11	METAL CHIP	3.6K	0.50%	1/16W
R3343	1-216-809-11	RES-CHIP	100	5%	1/10W
R3344	1-216-853-11	RES-CHIP	470K	5%	1/10W
R3345	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R3346	1-216-809-11	RES-CHIP	100	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R3347	1-216-815-11	RES-CHIP	330	5%	1/10W
R3348	1-216-864-11	SHORT CHIP	0		
R3349	1-218-687-11	METAL CHIP	620	0.50%	1/16W
R3350	1-216-814-11	RES-CHIP	270	5%	1/10W
R3351	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R3352	1-216-853-11	RES-CHIP	470K	5%	1/10W
R3353	1-216-837-11	RES-CHIP	22K	5%	1/10W
R3354	1-216-813-11	RES-CHIP	220	5%	1/10W
R3355	1-216-821-11	RES-CHIP	1K	5%	1/10W
R3357	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R3358	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R3359	1-218-676-11	METAL CHIP	220	0.50%	1/16W
R3360	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R3365	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R3367	1-216-805-11	RES-CHIP	47	5%	1/10W
R3368	1-216-864-11	SHORT CHIP	0		
R3370	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3371	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R3372	1-216-817-11	RES-CHIP	470	5%	1/10W
R3373	1-216-817-11	RES-CHIP	470	5%	1/10W
R3374	1-216-809-11	RES-CHIP	100	5%	1/10W
R3375	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R3376	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R3377	1-216-817-11	RES-CHIP	470	5%	1/10W
R3378	1-216-817-11	RES-CHIP	470	5%	1/10W
R3379	1-216-809-11	RES-CHIP	100	5%	1/10W
R3380	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R3381	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R3383	1-216-817-11	RES-CHIP	470	5%	1/10W
R3395	1-216-864-11	SHORT CHIP	0		
R3396	1-216-864-11	SHORT CHIP	0		
R3400	1-216-864-11	SHORT CHIP	0		
R3401	1-216-864-11	SHORT CHIP	0		
R3406	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3407	1-216-864-11	SHORT CHIP	0		
R3409	1-216-864-11	SHORT CHIP	0		
R3410	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3411	1-216-797-11	RES-CHIP	10	5%	1/10W
R3421	1-216-864-11	SHORT CHIP	0		
R3422	1-216-864-11	SHORT CHIP	0		
R3425	1-216-864-11	SHORT CHIP	0		
R3428	1-469-094-21	FERRITE	0µH		
R3435	1-216-809-11	RES-CHIP	100	5%	1/10W
R3436	1-216-809-11	RES-CHIP	100	5%	1/10W
R3437	1-216-809-11	RES-CHIP	100	5%	1/10W
R3438	1-216-809-11	RES-CHIP	100	5%	1/10W
R3439	1-216-809-11	RES-CHIP	100	5%	1/10W
R3440	1-216-809-11	RES-CHIP	100	5%	1/10W
R3441	1-216-809-11	RES-CHIP	100	5%	1/10W
R3442	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3445	1-216-864-11	SHORT CHIP	0		
R3451	1-216-809-11	RES-CHIP	100	5%	1/10W
R3452	1-216-864-11	SHORT CHIP	0		
R3454	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R3457	1-216-813-11	RES-CHIP	220	5%	1/10W
R3460	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3461	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3466	1-216-813-11	RES-CHIP	220	5%	1/10W
R3468	1-216-864-11	SHORT CHIP	0		
R3469	1-216-864-11	SHORT CHIP	0		
R3470	1-216-809-11	RES-CHIP	100	5%	1/10W
R3473	1-216-864-11	SHORT CHIP	0		
R3475	1-216-809-11	RES-CHIP	100	5%	1/10W
R3480	1-216-809-11	RES-CHIP	100	5%	1/10W
R3489	1-216-864-11	SHORT CHIP	0		
R3490	1-216-864-11	SHORT CHIP	0		
R3494	1-216-813-11	RES-CHIP	220	5%	1/10W
R3497	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R3498	1-216-818-11	RES-CHIP	560	5%	1/10W
R3507	1-216-821-11	RES-CHIP	1K	5%	1/10W
R3508	1-216-821-11	RES-CHIP	1K	5%	1/10W
R3509	1-216-821-11	RES-CHIP	1K	5%	1/10W
R3510	1-216-821-11	RES-CHIP	1K	5%	1/10W
R3511	1-216-821-11	RES-CHIP	1K	5%	1/10W
R3512	1-216-821-11	RES-CHIP	1K	5%	1/10W
R3533	1-216-809-11	RES-CHIP	100	5%	1/10W
R3534	1-216-809-11	RES-CHIP	100	5%	1/10W
R3535	1-216-809-11	RES-CHIP	100	5%	1/10W
R3536	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3537	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3538	1-216-864-11	SHORT CHIP	0		
R3539	1-216-864-11	SHORT CHIP	0		
R3540	1-216-864-11	SHORT CHIP	0		
R3541	1-216-864-11	SHORT CHIP	0		
R3542	1-216-864-11	SHORT CHIP	0		
R3575	1-216-864-11	SHORT CHIP	0		
R3601	1-216-864-11	SHORT CHIP	0		
R3602	1-216-864-11	SHORT CHIP	0		

B

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R3603	1-216-864-11	SHORT CHIP	0		
R3604	1-216-864-11	SHORT CHIP	0		
R3605	1-216-864-11	SHORT CHIP	0		
R3606	1-216-864-11	SHORT CHIP	0		
R3607	1-216-864-11	SHORT CHIP	0		
R3608	1-216-864-11	SHORT CHIP	0		
R3609	1-216-864-11	SHORT CHIP	0		
R3610	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3611	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3612	1-216-845-11	RES-CHIP	100K	5%	1/10W
R3613	1-216-801-11	RES-CHIP	22	5%	1/10W
R3614	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R3615	1-218-867-11	RES-CHIP	6.8K	5%	1/10W
R3616	1-216-809-11	RES-CHIP	100	5%	1/10W
R3617	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3800	1-216-864-11	SHORT CHIP	0		
R3811	1-216-809-11	RES-CHIP	100	5%	1/10W
R3812	1-216-809-11	RES-CHIP	100	5%	1/10W
R3813	1-216-809-11	RES-CHIP	100	5%	1/10W
R3820	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R3821	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R3822	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R3823	1-216-826-11	RES-CHIP	2.7K	5%	1/10W
R3824	1-216-826-11	RES-CHIP	2.7K	5%	1/10W
R3825	1-216-826-11	RES-CHIP	2.7K	5%	1/10W
R3826	1-216-809-11	RES-CHIP	100	5%	1/10W
R3828	1-218-682-11	METAL CHIP	390	0.50%	1/16W
R3829	1-218-682-11	METAL CHIP	390	0.50%	1/16W
R3830	1-218-682-11	METAL CHIP	390	0.50%	1/16W
R3831	1-216-864-11	SHORT CHIP	0		
R3832	1-216-864-11	SHORT CHIP	0		
R3833	1-216-864-11	SHORT CHIP	0		
R3840	1-216-805-11	RES-CHIP	47	5%	1/10W
R3846	1-216-801-11	RES-CHIP	22	5%	1/10W
R3847	1-216-801-11	RES-CHIP	22	5%	1/10W
R3848	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R3849	1-218-675-11	METAL CHIP	200	0.50%	1/16W
R3850	1-218-675-11	METAL CHIP	200	0.50%	1/16W
R3851	1-216-809-11	RES-CHIP	100	5%	1/10W
R3852	1-218-675-11	METAL CHIP	200	0.50%	1/16W
R3854	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R3857	1-216-809-11	RES-CHIP	100	5%	1/10W
R3858	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R3862	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R3863	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R3864	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R3865	1-216-809-11	RES-CHIP	100	5%	1/10W
R3866	1-414-234-22	FERRITE	0µH		
R3867	1-414-234-22	FERRITE	0µH		
R3868	1-414-234-22	FERRITE	0µH		
R3881	1-216-807-11	RES-CHIP	68	5%	1/10W
R3882	1-216-807-11	RES-CHIP	68	5%	1/10W
R3883	1-216-807-11	RES-CHIP	68	5%	1/10W
R3911	1-216-821-11	RES-CHIP	1K	5%	1/10W
R3917	1-216-809-11	RES-CHIP	100	5%	1/10W
R3928	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3933	1-216-864-11	SHORT CHIP	0		
R3956	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R3957	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R3958	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R3973	1-216-809-11	RES-CHIP	100	5%	1/10W
R3974	1-216-833-11	RES-CHIP	10K	5%	1/10W
R3984	1-218-644-11	METAL CHIP	10	0.50%	1/16W
R3985	1-218-644-11	METAL CHIP	10	0.50%	1/16W
R3986	1-218-644-11	METAL CHIP	10	0.50%	1/16W
R8606	1-216-819-11	RES-CHIP	680	5%	1/10W
R8607	1-216-819-11	RES-CHIP	680	5%	1/10W
R8608	1-216-819-11	RES-CHIP	680	5%	1/10W
R8609	1-216-809-11	RES-CHIP	100	5%	1/10W
R8610	1-216-809-11	RES-CHIP	100	5%	1/10W
R8611	1-216-809-11	RES-CHIP	100	5%	1/10W
R8612	1-216-820-11	RES-CHIP	820	5%	1/10W
R8613	1-216-820-11	RES-CHIP	820	5%	1/10W
R8614	1-216-820-11	RES-CHIP	820	5%	1/10W
R8615	1-216-809-11	RES-CHIP	100	5%	1/10W
R8616	1-216-809-11	RES-CHIP	100	5%	1/10W
R8617	1-216-809-11	RES-CHIP	100	5%	1/10W
R8618	1-218-679-11	METAL CHIP	300	0.50%	1/16W
R8619	1-218-679-11	METAL CHIP	300	0.50%	1/16W
R8620	1-218-675-11	METAL CHIP	200	0.50%	1/16W
R8621	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8622	1-218-679-11	METAL CHIP	300	0.50%	1/16W
R8623	1-218-679-11	METAL CHIP	300	0.50%	1/16W
R8624	1-218-675-11	METAL CHIP	200	0.50%	1/16W
R8625	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8626	1-216-809-11	RES-CHIP	100	5%	1/10W
R8627	1-216-809-11	RES-CHIP	100	5%	1/10W
R8628	1-216-809-11	RES-CHIP	100	5%	1/10W

B MS1

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8629	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R8630	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R8631	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R8632	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8636	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8637	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8638	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8639	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R8641	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8642	1-218-703-11	METAL CHIP	3K	0.50%	1/16W
R8643	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8645	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8646	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8647	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8648	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R8650	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8651	1-216-801-11	RES-CHIP	22	5%	1/10W
R8652	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8653	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8654	1-216-864-11	SHORT CHIP	0		
R8655	1-216-864-11	SHORT CHIP	0		

RESISTOR BRIDGE

RB3005	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3006	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3007	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3008	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3009	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3010	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3011	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3012	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3013	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3014	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3015	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3100	1-233-574-11	RES, CHIP NETWORK	10	
RB3101	1-233-574-11	RES, CHIP NETWORK	10	
RB3102	1-233-574-11	RES, CHIP NETWORK	10	
RB3103	1-233-574-11	RES, CHIP NETWORK	10	
RB3304	1-233-576-11	RES, CHIP NETWORK	100	
RB3305	1-233-576-11	RES, CHIP NETWORK	100	
RB3306	1-233-576-11	RES, CHIP NETWORK	100	
RB3307	1-233-576-11	RES, CHIP NETWORK	100	
RB3401	1-234-524-21	RES, CHIP NETWORK	33	
RB3402	1-234-524-21	RES, CHIP NETWORK	33	
RB3403	1-234-524-21	RES, CHIP NETWORK	33	
RB3404	1-234-524-21	RES, CHIP NETWORK	33	
RB3405	1-234-524-21	RES, CHIP NETWORK	33	
RB3406	1-234-524-21	RES, CHIP NETWORK	33	
RB3407	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3408	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3409	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3410	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3411	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3412	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB3421	1-233-576-11	RES, CHIP NETWORK	100	
RB3422	1-233-576-11	RES, CHIP NETWORK	100	
RB3423	1-233-576-11	RES, CHIP NETWORK	100	
RB3424	1-233-576-11	RES, CHIP NETWORK	100	
RB3425	1-233-576-11	RES, CHIP NETWORK	100	
RB3426	1-233-576-11	RES, CHIP NETWORK	100	
RB3427	1-233-576-11	RES, CHIP NETWORK	100	
RB3428	1-233-576-11	RES, CHIP NETWORK	100	
RB3436	1-234-523-21	RES, CHIP NETWORK	0	-3216
RB3437	1-234-523-21	RES, CHIP NETWORK	0	-3216
RB3438	1-234-523-21	RES, CHIP NETWORK	0	-3216
RB3439	1-234-523-21	RES, CHIP NETWORK	0	-3216

CRYSTAL

X2801	1-760-895-21	VIBRATOR, CERAMIC			
X3089	1-781-945-21	VIBRATOR, CERAMIC			
X3401	1-781-887-21	VIBRATOR, CRYSTAL			

MS1

The MS1 board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

*	**A-1300-408-A**	**MS1 BOARD, COMPLETE**			

CAPACITOR

C101	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C102	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C103	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C105	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C106	1-110-501-11	CERAMIC CHIP	0.33µF	10%	16V
C107	1-126-390-11	ELECT CHIP	22µF	20%	6.3V
C108	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C109	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C110	1-126-394-11	ELECT CHIP	10µF	20%	16V
C111	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C112	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C113	1-162-916-11	CERAMIC CHIP	12pF	5%	50V
C114	1-162-916-11	CERAMIC CHIP	12pF	5%	50V
C115	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C116	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C117	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C118	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C119	1-216-864-11	SHORT CHIP	0		
C121	1-216-821-11	RES-CHIP	1K	5%	1/10W
C123	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C124	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C125	1-128-934-91	CERAMIC CHIP	0.33µF	20%	10V
C127	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C128	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C129	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C130	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C131	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C132	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C133	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C134	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C135	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C136	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C137	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C138	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C139	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C140	1-126-390-11	ELECT CHIP	22µF	20%	6.3V
C141	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C142	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C143	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C144	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C145	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C146	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C147	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C148	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C149	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C150	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C151	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C152	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C153	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C154	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C158	1-124-779-00	ELECT CHIP	10µF	20%	16V
C159	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C160	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C161	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C162	1-126-394-11	ELECT CHIP	10µF	20%	16V
C163	1-126-394-11	ELECT CHIP	10µF	20%	16V
C165	1-124-779-00	ELECT CHIP	10µF	20%	16V
C166	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C167	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C168	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C169	1-124-779-00	ELECT CHIP	10µF	20%	16V
C185	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V

CONNECTOR

CN104	1-816-068-21	CONNECTOR, BOARD TO BOARD 60P

DIODE

D102	8-719-024-79	DIODE HN2D01FU-TE85R
D103	8-719-024-79	DIODE HN2D01FU-TE85R
D104	8-719-024-79	DIODE HN2D01FU-TE85R
D105	8-719-024-79	DIODE HN2D01FU-TE85R
D106	8-719-024-79	DIODE HN2D01FU-TE85R

FERRITE BEAD

FB101	1-414-921-11	FERRITE	0µH
FB102	1-414-921-11	FERRITE	0µH
FB103	1-414-921-11	FERRITE	0µH
FB104	1-414-921-11	FERRITE	0µH
FB105	1-414-921-11	FERRITE	0µH
FB106	1-500-451-11	FERRITE	0µH
FB107	1-414-921-11	FERRITE	0µH
FB108	1-414-921-11	FERRITE	0µH
FB109	1-414-921-11	FERRITE	0µH
FB110	1-414-921-11	FERRITE	0µH
FB111	1-414-921-11	FERRITE	0µH
FB112	1-414-228-11	FERRITE	0µH
FB120	1-414-921-11	FERRITE	0µH
FB121	1-414-921-11	FERRITE	0µH
FB122	1-414-921-11	FERRITE	0µH
FB123	1-414-921-11	FERRITE	0µH
FB124	1-414-921-11	FERRITE	0µH
FB125	1-414-921-11	FERRITE	0µH
FB126	1-414-921-11	FERRITE	0µH
FB137	1-414-921-11	FERRITE	0µH

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

MS1

REF. NO.	PART NO.	DESCRIPTION	VALUES
FB138	1-414-921-11	FERRITE	0µH
FB139	1-414-921-11	FERRITE	0µH
FB140	1-216-864-11	SHORT CHIP	0
FB141	1-414-921-11	FERRITE	0µH
FB142	1-216-864-11	SHORT CHIP	0
FB143	1-414-921-11	FERRITE	0µH
FB144	1-216-864-11	SHORT CHIP	0
FB145	1-216-864-11	SHORT CHIP	0
FB146	1-216-864-11	SHORT CHIP	0
FB147	1-216-864-11	SHORT CHIP	0
FB148	1-216-864-11	SHORT CHIP	0
FB149	1-414-921-11	FERRITE	0µH
FB152	1-216-864-11	SHORT CHIP	0
FB153	1-216-864-11	SHORT CHIP	0
FB154	1-216-864-11	SHORT CHIP	0
FB155	1-216-864-11	SHORT CHIP	0
	IC		
IC101	6-700-921-01	IC MD2305F	
⚠ IC102	6-801-874-11	IC SST39VF800A70-11124-T	
IC103	6-701-043-11	IC HM62V16256CLTT-5SLZ	
IC104	8-759-460-72	IC BA033FP-E2	
IC105	8-759-584-32	IC MB86189pFV-G-BND-ER	
IC106	8-759-661-55	IC 24LC21AT/SN	
IC108	6-702-511-01	IC MT48LC8M16A2TG-75-Y95W	
IC109	6-702-038-01	IC PST3628NL	
IC110	6-800-922-01	IC ISPLSI2032VE-110LT44/10921	
IC115	8-759-698-31	IC TC7WH74FK(TE85R)	
IC119	8-759-592-50	IC TC7SZ126FU(TE85R)	
IC120	8-759-592-50	IC TC7SZ126FU(TE85R)	
IC121	8-752-927-18	IC CXP85112B-679Q	
IC122	8-759-349-11	IC PST9145NL	
IC126	8-759-058-58	IC TC7S04FU(TE85R)	
	COIL		
L106	1-469-555-21	INDUCTOR	10µH
L107	1-469-561-21	INDUCTOR	100µH
	TRANSISTOR		
Q101	8-729-013-28	TRANSISTOR HN1B01FU-TE85R	
Q103	8-729-013-28	TRANSISTOR HN1B01FU-TE85R	
Q104	8-729-013-28	TRANSISTOR HN1B01FU-TE85R	
Q105	8-729-427-72	TRANSISTOR HN1C01FU-TE85R	
Q110	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q116	8-729-900-53	TRANSISTOR DTC114EKA-T146	

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	RESISTOR				
R101	1-216-797-11	RES-CHIP	10	5%	1/10W
R102	1-216-797-11	RES-CHIP	10	5%	1/10W
R103	1-216-797-11	RES-CHIP	10	5%	1/10W
R104	1-216-864-11	SHORT CHIP	0		
R105	1-216-864-11	SHORT CHIP	0		
R106	1-216-864-11	SHORT CHIP	0		
R107	1-216-864-11	SHORT CHIP	0		
R108	1-216-833-11	RES-CHIP	10K	5%	1/10W
R109	1-216-864-11	SHORT CHIP	0		
R110	1-216-833-11	RES-CHIP	10K	5%	1/10W
R111	1-216-833-11	RES-CHIP	10K	5%	1/10W
R112	1-216-833-11	RES-CHIP	10K	5%	1/10W
R113	1-216-833-11	RES-CHIP	10K	5%	1/10W
R114	1-216-864-11	SHORT CHIP	0		
R115	1-216-845-11	RES-CHIP	100K	5%	1/10W
R116	1-216-845-11	RES-CHIP	100K	5%	1/10W
R117	1-216-864-11	SHORT CHIP	0		
R118	1-216-845-11	RES-CHIP	100K	5%	1/10W
R119	1-216-845-11	RES-CHIP	100K	5%	1/10W
R120	1-216-845-11	RES-CHIP	100K	5%	1/10W
R121	1-216-864-11	SHORT CHIP	0		
R122	1-216-833-11	RES-CHIP	10K	5%	1/10W
R123	1-216-833-11	RES-CHIP	10K	5%	1/10W
R126	1-216-821-11	RES-CHIP	1K	5%	1/10W
R127	1-216-833-11	RES-CHIP	10K	5%	1/10W
R128	1-216-864-11	SHORT CHIP	0		
R130	1-216-845-11	RES-CHIP	100K	5%	1/10W
R131	1-216-821-11	RES-CHIP	1K	5%	1/10W
R132	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R133	1-218-867-11	RES-CHIP	6.8K	5%	1/10W
R134	1-216-833-11	RES-CHIP	10K	5%	1/10W
R135	1-216-833-11	RES-CHIP	10K	5%	1/10W
R136	1-216-809-11	RES-CHIP	100	5%	1/10W
R138	1-216-833-11	RES-CHIP	10K	5%	1/10W
R140	1-216-833-11	RES-CHIP	10K	5%	1/10W
R141	1-216-864-11	SHORT CHIP	0		
R142	1-216-864-11	SHORT CHIP	0		
R143	1-216-833-11	RES-CHIP	10K	5%	1/10W
R144	1-216-809-11	RES-CHIP	100	5%	1/10W
R145	1-216-809-11	RES-CHIP	100	5%	1/10W
R146	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R147	1-216-864-11	SHORT CHIP	0		

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R148	1-216-839-11	RES-CHIP	33K	5%	1/10W
R149	1-216-839-11	RES-CHIP	33K	5%	1/10W
R152	1-216-833-11	RES-CHIP	10K	5%	1/10W
R153	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R154	1-216-864-11	SHORT CHIP	0		
R155	1-216-864-11	SHORT CHIP	0		
R156	1-216-845-11	RES-CHIP	100K	5%	1/10W
R157	1-216-809-11	RES-CHIP	100	5%	1/10W
R158	1-216-864-11	SHORT CHIP	0		
R159	1-216-833-11	RES-CHIP	10K	5%	1/10W
R160	1-216-833-11	RES-CHIP	10K	5%	1/10W
R161	1-216-801-11	RES-CHIP	22	5%	1/10W
R162	1-216-809-11	RES-CHIP	100	5%	1/10W
R163	1-216-809-11	RES-CHIP	100	5%	1/10W
R164	1-216-833-11	RES-CHIP	10K	5%	1/10W
R166	1-216-864-11	SHORT CHIP	0		
R167	1-216-809-11	RES-CHIP	100	5%	1/10W
R168	1-216-864-11	SHORT CHIP	0		
R169	1-216-809-11	RES-CHIP	100	5%	1/10W
R170	1-216-864-11	SHORT CHIP	0		
R171	1-216-809-11	RES-CHIP	100	5%	1/10W
R172	1-216-864-11	SHORT CHIP	0		
R173	1-216-801-11	RES-CHIP	22	5%	1/10W
R174	1-216-864-11	SHORT CHIP	0		
R176	1-216-864-11	SHORT CHIP	0		
R177	1-216-864-11	SHORT CHIP	0		
R178	1-216-864-11	SHORT CHIP	0		
R180	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R181	1-216-833-11	RES-CHIP	10K	5%	1/10W
R184	1-216-809-11	RES-CHIP	100	5%	1/10W
R186	1-216-864-11	SHORT CHIP	0		
R189	1-216-864-11	SHORT CHIP	0		
R190	1-216-864-11	SHORT CHIP	0		
R192	1-216-833-11	RES-CHIP	10K	5%	1/10W
R193	1-216-833-11	RES-CHIP	10K	5%	1/10W
R195	1-216-801-11	RES-CHIP	22	5%	1/10W
R196	1-216-809-11	RES-CHIP	100	5%	1/10W
R197	1-216-809-11	RES-CHIP	100	5%	1/10W
R199	1-216-833-11	RES-CHIP	10K	5%	1/10W
R200	1-216-833-11	RES-CHIP	10K	5%	1/10W
R203	1-216-864-11	SHORT CHIP	0		
R204	1-216-864-11	SHORT CHIP	0		
R206	1-216-809-11	RES-CHIP	100	5%	1/10W
R207	1-216-864-11	SHORT CHIP	0		
R208	1-216-801-11	RES-CHIP	22	5%	1/10W
R209	1-216-809-11	RES-CHIP	100	5%	1/10W
R213	1-218-830-11	METAL CHIP	200	0.50%	1/10W
R216	1-216-864-11	SHORT CHIP	0		
R217	1-216-833-11	RES-CHIP	10K	5%	1/10W
R218	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R219	1-216-833-11	RES-CHIP	10K	5%	1/10W
R220	1-216-864-11	SHORT CHIP	0		
R221	1-216-809-11	RES-CHIP	100	5%	1/10W
R222	1-216-809-11	RES-CHIP	100	5%	1/10W
R224	1-216-833-11	RES-CHIP	10K	5%	1/10W
R225	1-216-833-11	RES-CHIP	10K	5%	1/10W
R226	1-216-833-11	RES-CHIP	10K	5%	1/10W
R230	1-216-833-11	RES-CHIP	10K	5%	1/10W
R231	1-216-864-11	SHORT CHIP	0		
R233	1-216-833-11	RES-CHIP	10K	5%	1/10W
R245	1-216-833-11	RES-CHIP	10K	5%	1/10W
R246	1-216-809-11	RES-CHIP	100	5%	1/10W
R283	1-216-833-11	RES-CHIP	10K	5%	1/10W
R284	1-216-833-11	RES-CHIP	10K	5%	1/10W
R286	1-216-833-11	RES-CHIP	10K	5%	1/10W
R287	1-216-833-11	RES-CHIP	10K	5%	1/10W
R288	1-216-797-11	RES-CHIP	10	5%	1/10W
R290	1-216-797-11	RES-CHIP	10	5%	1/10W
R292	1-216-821-11	RES-CHIP	1K	5%	1/10W
R295	1-216-864-11	SHORT CHIP	0		
R297	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9239	1-216-803-11	RES-CHIP	33	5%	1/10W
R9240	1-216-803-11	RES-CHIP	33	5%	1/10W
R9242	1-216-803-11	RES-CHIP	33	5%	1/10W
R9243	1-216-803-11	RES-CHIP	33	5%	1/10W

RESISTOR BRIDGE

RB101	1-233-810-21	RES, NETWORK	100K	-3216
RB102	1-233-810-21	RES, NETWORK	100K	-3216
RB103	1-233-810-21	RES, NETWORK	100K	-3216
RB104	1-233-810-21	RES, NETWORK	100K	-3216
RB105	1-233-576-11	RES, CHIP NETWORK	100	
RB106	1-236-908-11	RES, CHIP NETWORK	10K	-3216
RB107	1-233-574-11	RES, CHIP NETWORK	10	
RB108	1-233-574-11	RES, CHIP NETWORK	10	
RB109	1-233-574-11	RES, CHIP NETWORK	10	
RB110	1-233-574-11	RES, CHIP NETWORK	10	

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

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MS1 G

REF. NO.	PART NO.	DESCRIPTION	VALUES		
RB112	1-233-574-11	RES, CHIP NETWORK	10		
RB113	1-233-574-11	RES, CHIP NETWORK	10		
RB114	1-233-574-11	RES, CHIP NETWORK	10		
RB115	1-233-574-11	RES, CHIP NETWORK	10		
RB116	1-233-574-11	RES, CHIP NETWORK	10		
RB117	1-233-574-11	RES, CHIP NETWORK	10		
RB118	1-233-574-11	RES, CHIP NETWORK	10		
RB119	1-233-574-11	RES, CHIP NETWORK	10		
RB120	1-233-574-11	RES, CHIP NETWORK	10		
RB121	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB122	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB123	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB124	1-239-409-11	RES, CHIP NETWORK	47	-3216	
RB125	1-233-574-11	RES, CHIP NETWORK	10		
RB126	1-233-574-11	RES, CHIP NETWORK	10		
RB127	1-233-574-11	RES, CHIP NETWORK	10		
RB128	1-233-574-11	RES, CHIP NETWORK	10		
RB129	1-233-810-21	RES, NETWORK	100K	-3216	
RB130	1-233-810-21	RES, NETWORK	100K	-3216	
RB131	1-236-908-11	RES, CHIP NETWORK	10K	-3216	
RB132	1-236-908-11	RES, CHIP NETWORK	10K	-3216	
RB133	1-236-908-11	RES, CHIP NETWORK	10K	-3216	
RB134	1-236-908-11	RES, CHIP NETWORK	10K	-3216	
RB135	1-233-416-11	RES, CHIP NETWORK	22K	-3216	
RB136	1-233-416-11	RES, CHIP NETWORK	22K	-3216	
RB137	1-233-810-21	RES, NETWORK	100K	-3216	
RB138	1-233-810-21	RES, NETWORK	100K	-3216	

CRYSTAL

X101	1-795-098-21	VIBRATOR, CRYSTAL	
X102	1-795-116-21	VIBRATOR, CERAMIC	
X104	1-781-076-11	OSCILLATOR, CRYSTAL	

G

⚠ *	A-1300-410-A	G BOARD, COMPLETE	
*	4-374-846-01	COVER,CAPACITOR, CAP TYPE	
	4-382-854-11	SCREW (M3X10), P, SW (+)	

CAPACITOR

C6501	1-126-933-11	ELECT	100µF	20%	16V
C6502	1-126-937-11	ELECT	4700µF	20%	16V
C6503	1-126-933-11	ELECT	100µF	20%	16V
C6514	1-126-943-11	ELECT	2200µF	20%	25V
C6516	1-104-665-11	ELECT	100µF	20%	25V
C6517	1-126-933-11	ELECT	100µF	20%	16V
C6521	1-126-768-11	ELECT	2200µF	20%	16V
C6525	1-104-665-11	ELECT	100µF	20%	25V
C6526	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C6531	1-126-943-11	ELECT	2200µF	20%	25V
C6532	1-115-781-11	ELECT	220µF	20%	25V
C6534	1-104-665-11	ELECT	100µF	20%	25V
C6535	1-126-943-11	ELECT	2200µF	20%	25V
C6536	1-115-781-11	ELECT	220µF	20%	25V
C6541	1-126-941-11	ELECT	470µF	20%	25V
C6542	1-104-665-11	ELECT	100µF	20%	25V
C6546	1-126-941-11	ELECT	470µF	20%	25V
C6547	1-104-665-11	ELECT	100µF	20%	25V
C6553	1-137-651-11	ELECT	560µF	20%	160V
C6554	1-137-651-11	ELECT	560µF	20%	160V
C6560	1-128-550-11	ELECT	2200µF	20%	50V
C6561	1-126-964-11	ELECT	10µF	20%	50V
C6567	1-126-947-11	ELECT	47µF	20%	25V
C6568	1-126-947-11	ELECT	47µF	20%	25V
C6569	1-104-665-11	ELECT	100µF	20%	25V
C6570	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C6572	1-126-933-11	ELECT	100µF	20%	16V
C6573	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C6575	1-126-963-11	ELECT	4.7µF	20%	50V
C6581	1-104-666-11	ELECT	220µF	20%	25V
C6702	1-161-964-91	CERAMIC	0.0047µF		250V
C6703	1-161-964-91	CERAMIC	0.0047µF		250V
C6704	1-100-215-11	ELECT	1800µF	20%	250V
⚠ C6705	1-104-706-11	MYLAR	0.22µF	20%	250V
C6707	1-161-964-91	CERAMIC	0.0047µF		250V
C6708	1-161-964-91	CERAMIC	0.0047µF		250V
C6709	1-164-645-11	CERAMIC	1000pF	10%	500V
C6710	1-100-215-11	ELECT	1800µF	20%	250V
C6711	1-165-950-11	FILM	68000pF	3%	800V
C6712	1-125-969-91	CERAMIC	680pF	10%	1KV
C6714	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C6715	1-136-479-11	FILM	0.001µF	2%	50V
C6717	1-117-228-11	MYLAR	2.2µF	10%	450V
C6718	1-136-165-00	FILM	0.1µF	5%	50V
C6719	1-126-964-11	ELECT	10µF	20%	50V
C6720	1-125-969-91	CERAMIC	680pF	10%	1KV
C6721	1-126-963-11	ELECT	4.7µF	20%	50V

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

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	REF. NO.	PART NO.	DESCRIPTION	VALUES		
	C6723	1-126-949-11	ELECT	220µF	20%	35V
	C6724	1-126-967-11	ELECT	47µF	20%	50V
	C6725	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
	C6726	1-126-947-11	ELECT	47µF	20%	25V
	C6727	1-126-968-11	ELECT	100µF	20%	50V
		CONNECTOR				
	CN6503	1-779-092-11	PIN,CONNECTOR (PC BOARD)	10P		
*	CN6504	1-564-508-11	PLUG,CONNECTOR	5P		
*	CN6505	1-564-507-11	PLUG,CONNECTOR	4P		
	CN6506	1-764-334-11	PLUG,CONNECTOR	11P		
*	CN6507	1-564-515-11	PLUG,CONNECTOR	12P		
*	CN6701	1-766-240-11	PIN,CONNECTOR (PC BOARD)	2P		
		DIODE				
	D6501	8-719-988-61	DIODE 1SS355TE-17			
	D6502	8-719-052-92	DIODE D10SBS4F			
	D6503	8-719-510-37	DIODE D5LC20U			
	D6504	8-719-988-61	DIODE 1SS355TE-17			
	D6505	8-719-988-61	DIODE 1SS355TE-17			
	D6507	8-719-083-67	DIODE UDZSTE-1720B			
	D6511	8-719-060-89	DIODE D4SBS6-F			
	D6514	8-719-063-74	DIODE D1NL20U-TR2			
	D6515	8-719-060-89	DIODE D4SBS6-F			
	D6517	8-719-083-73	DIODE UDZSTE-1736B			
	D6518	8-719-050-18	DIODE D4SBL20U			
	D6519	8-719-060-89	DIODE D4SBS6-F			
	D6522	8-719-083-60	DIODE UDZSTE-174.7B			
	D6523	8-719-988-61	DIODE 1SS355TE-17			
	D6524	8-719-988-61	DIODE 1SS355TE-17			
	D6525	8-719-988-61	DIODE 1SS355TE-17			
	D6526	8-719-988-61	DIODE 1SS355TE-17			
	D6527	8-719-988-61	DIODE 1SS355TE-17			
	D6534	8-719-018-84	DIODE D2S6MTA1			
	D6535	8-719-018-84	DIODE D2S6MTA1			
	D6537	8-719-018-84	DIODE D2S6MTA1			
	D6538	8-719-018-84	DIODE D2S6MTA1			
	D6539	8-719-988-61	DIODE 1SS355TE-17			
	D6540	8-719-988-61	DIODE 1SS355TE-17			
	D6701	8-719-068-00	DIODE ERC04-06SE			
	D6702	8-719-022-99	DIODE D6SB60L			
	D6703	8-719-068-00	DIODE ERC04-06SE			
	D6706	8-719-948-45	DIODE ERA22-08			
	D6712	6-500-158-01	DIODE 10ERA60-TA2B5			
	D6715	8-719-063-70	DIODE D1NL20U-TA2			
	D6716	8-719-988-61	DIODE 1SS355TE-17			

	REF. NO.	PART NO.	DESCRIPTION	VALUES
		FERRITE BEAD		
	FB6503	1-410-396-41	FERRITE	0.45µH
	FB6504	1-410-396-41	FERRITE	0.45µH
	FB6505	1-410-397-21	FERRITE	1.1µH
	FB6508	1-410-397-21	FERRITE	1.1µH
	FB6509	1-410-396-41	FERRITE	0.45µH
	FB6510	1-410-396-41	FERRITE	0.45µH
	FB6511	1-410-396-41	FERRITE	0.45µH
	FB6512	1-410-396-41	FERRITE	0.45µH
	FB6703	1-410-396-41	FERRITE	0.45µH
		IC		
	IC6501	8-759-394-35	IC BA12T	
	IC6502	8-759-103-93	IC UPC393C	
⚠	IC6503	8-749-012-13	IC DM-58	
⚠	IC6504	8-759-198-31	IC UPC1093J-1-T	
	IC6701	8-759-670-30	IC MCZ3001D	
		CHIP CONDUCTOR		
	JR6502	1-216-295-91	SHORT CHIP	0
	JR6503	1-216-295-91	SHORT CHIP	0
	JR6504	1-216-295-91	SHORT CHIP	0
	JR6505	1-216-295-91	SHORT CHIP	0
	JR6506	1-216-295-91	SHORT CHIP	0
	JR6507	1-216-295-91	SHORT CHIP	0
	JR6508	1-216-295-91	SHORT CHIP	0
	JR6509	1-216-295-91	SHORT CHIP	0
	JR6511	1-216-295-91	SHORT CHIP	0
	JR6512	1-216-295-91	SHORT CHIP	0
	JR6513	1-216-295-91	SHORT CHIP	0
		COIL		
	L6501	1-406-661-21	INDUCTOR	22µH
	L6504	1-412-529-11	INDUCTOR	22µH
	L6505	1-412-529-11	INDUCTOR	22µH
	L6506	1-412-525-31	INDUCTOR	10µH
	L6507	1-412-525-31	INDUCTOR	10µH
	L6509	1-412-529-11	INDUCTOR	22µH
	L6511	1-412-529-11	INDUCTOR	22µH
	L6512	1-412-533-21	INDUCTOR	47µH
	L6513	1-412-533-21	INDUCTOR	47µH
	L6514	1-406-665-11	INDUCTOR	100µH
	L6515	1-406-659-11	INDUCTOR	10µH
	L6517	1-414-189-31	INDUCTOR	100µH
	L6518	1-412-524-11	INDUCTOR	8.2µH

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REF. NO.	PART NO.	DESCRIPTION	VALUES
L6519	1-412-524-11	INDUCTOR	8.2µH
L6520	1-414-158-11	INDUCTOR	2.2µH
L6521	1-414-158-11	INDUCTOR	2.2µH
L6701	1-424-862-11	INDUCTOR	33µH
	PHOTO COUPLER		
⚠ PH6001	8-749-924-35	PHOTO COUPLER	ON3171-R
⚠ PH6002	8-749-924-35	PHOTO COUPLER	ON3171-R
	IC LINK		
⚠ PS6501	1-533-597-41	LINK, IC	
⚠ PS6502	1-533-597-41	LINK, IC	
⚠ PS6503	1-533-597-31	LINK, IC	
⚠ PS6504	1-533-597-31	LINK, IC	
⚠ PS6505	1-533-597-31	LINK, IC	
⚠ PS6506	1-533-597-31	LINK, IC	
⚠ PS6507	1-533-282-21	LINK, IC	
PS6508	1-533-597-31	LINK, IC	
PS6509	1-533-597-31	LINK, IC	
	TRANSISTOR		
Q6502	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q6503	8-729-050-50	TRANSISTOR 2SD1782K-T146-R	
Q6504	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q6701	8-729-052-32	TRANSISTOR IRFIB7N50A-LF31	
Q6702	8-729-052-32	TRANSISTOR IRFIB7N50A-LF31	
	RESISTOR		
R6501	1-216-073-91	RES-CHIP	10K 5% 1/10W
R6505	1-215-900-11	METAL OXIDE	22K 5% 2W
R6506	1-216-361-00	METAL OXIDE	0.22 5% 2W
R6507	1-216-073-91	RES-CHIP	10K 5% 1/10W
R6508	1-216-375-00	METAL OXIDE	3.3 5% 2W
R6510	1-216-821-11	RES-CHIP	1K 5% 1/10W
R6511	1-216-824-11	RES-CHIP	1.8K 5% 1/10W
R6512	1-216-833-11	RES-CHIP	10K 5% 1/10W
R6513	1-216-295-91	SHORT CHIP	0
R6514	1-216-833-11	RES-CHIP	10K 5% 1/10W
R6515	1-216-821-11	RES-CHIP	1K 5% 1/10W
⚠ R6516	1-218-740-11	METAL CHIP	100K 0.50% 1/16W
⚠ R6517	1-218-708-11	METAL CHIP	4.7K 0.50% 1/16W
⚠ R6518	1-249-415-11	CARBON	680 5% 1/4W
R6519	1-218-708-11	METAL CHIP	4.7K 0.50% 1/16W
R6520	1-218-690-11	METAL CHIP	820 0.50% 1/16W
R6521	1-216-833-11	RES-CHIP	10K 5% 1/10W
R6523	1-216-821-11	RES-CHIP	1K 5% 1/10W
R6524	1-216-833-11	RES-CHIP	10K 5% 1/10W
R6525	1-216-821-11	RES-CHIP	1K 5% 1/10W
R6526	1-216-833-11	RES-CHIP	10K 5% 1/10W
R6527	1-216-837-11	RES-CHIP	22K 5% 1/10W
R6528	1-216-837-11	RES-CHIP	22K 5% 1/10W
⚠ R6535	1-218-740-11	METAL CHIP	100K 0.50% 1/16W
⚠ R6536	1-218-736-11	METAL CHIP	68K 0.50% 1/16W
R6537	1-249-405-11	CARBON	100 5% 1/4W
R6538	1-216-829-11	RES-CHIP	4.7K 5% 1/10W
R6539	1-218-708-11	METAL CHIP	4.7K 0.50% 1/16W
⚠ R6702	1-202-933-61	FUSIBLE	0.1 10% 1/2W
R6703	1-260-131-11	CARBON	470K 5% 1/2W
R6705	1-240-251-11	CEMENTED	6.8 5% 10W
R6707	1-260-131-11	CARBON	470K 5% 1/2W
R6709	1-260-328-11	CARBON	1K 5% 1/2W
R6710	1-215-481-00	METAL	330K 1% 1/4W
R6711	1-215-481-00	METAL	330K 1% 1/4W
⚠ R6712	1-249-417-11	CARBON	1K 5% 1/4W
⚠ R6713	1-249-393-11	CARBON	10 5% 1/4W
R6714	1-215-481-00	METAL	330K 1% 1/4W
R6715	1-216-829-11	RES-CHIP	4.7K 5% 1/10W
R6718	1-216-833-11	RES-CHIP	10K 5% 1/10W
R6721	1-218-715-11	METAL CHIP	9.1K 0.50% 1/16W
⚠ R6722	1-249-393-11	CARBON	10 5% 1/4W
R6723	1-218-720-11	METAL CHIP	15K 0.50% 1/16W
R6725	1-249-393-11	CARBON	10 5% 1/4W
R6727	1-216-833-11	RES-CHIP	10K 5% 1/10W
R6728	1-243-979-71	METAL OXIDE	0.1 5% 2W
R6729	1-243-979-71	METAL OXIDE	0.1 5% 2W
R6730	1-218-668-11	METAL CHIP	100 0.50% 1/16W
R6731	1-218-675-11	METAL CHIP	200 0.50% 1/16W
R6732	1-216-813-11	RES-CHIP	220 5% 1/10W
R6733	1-216-813-11	RES-CHIP	220 5% 1/10W
	RELAY		
⚠ RY6701	1-755-395-11	RELAY (AC POWER)	
⚠ RY6702	1-755-395-11	RELAY (AC POWER)	
	TRANSFORMER		
⚠ T6703	1-437-738-11	TRANSFORMER, CONVERTER (PIT)	

AD

AD

The AD board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

* **A-1300-411-A AD BOARD, COMPLETE**

CAPACITOR

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C9401	1-126-933-11	ELECT	100µF	20%	16V
C9402	1-126-933-11	ELECT	100µF	20%	16V
C9403	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9404	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C9405	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9406	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9407	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9408	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C9409	1-126-933-11	ELECT	100µF	20%	16V
C9410	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9411	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C9413	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9414	1-126-933-11	ELECT	100µF	20%	16V
C9415	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9416	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9419	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9422	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9424	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9425	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9426	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9427	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9428	1-126-933-11	ELECT	100µF	20%	16V
C9429	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9430	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9431	1-126-963-11	ELECT	4.7µF	20%	50V
C9432	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C9433	1-126-933-11	ELECT	100µF	20%	16V
C9434	1-126-933-11	ELECT	100µF	20%	16V
C9440	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C9441	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C9442	1-115-412-11	CERAMIC CHIP	680pF	5%	25V
C9444	1-115-412-11	CERAMIC CHIP	680pF	5%	25V
C9446	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9447	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9448	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9450	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9452	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C9453	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C9454	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C9458	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C9459	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9460	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9461	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9462	1-126-933-11	ELECT	100µF	20%	16V
C9463	1-126-933-11	ELECT	100µF	20%	16V
C9464	1-126-933-11	ELECT	100µF	20%	16V
C9465	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9466	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9467	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9468	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C9469	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C9470	1-115-412-11	CERAMIC CHIP	680pF	5%	25V
C9471	1-126-947-11	ELECT	47µF	20%	25V
C9472	1-115-412-11	CERAMIC CHIP	680pF	5%	25V
C9474	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9475	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9476	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9478	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9480	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C9481	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C9482	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C9483	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C9484	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9485	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9486	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9488	1-126-933-11	ELECT	100µF	20%	16V
C9489	1-126-933-11	ELECT	100µF	20%	16V
C9490	1-126-933-11	ELECT	100µF	20%	16V
C9491	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9492	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9493	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9494	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9495	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C9498	1-126-933-11	ELECT	100µF	20%	16V
C9501	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C9502	1-115-412-11	CERAMIC CHIP	680pF	5%	25V
C9503	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C9505	1-115-412-11	CERAMIC CHIP	680pF	5%	25V
C9506	1-164-156-11	CERAMIC CHIP	0.1µF		25V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C9508	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9509	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9511	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C9512	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9514	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C9515	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C9516	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C9517	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9518	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9520	1-164-173-11	CERAMIC CHIP	0.0039µF	10%	50V
C9521	1-164-173-11	CERAMIC CHIP	0.0039µF	10%	50V
C9523	1-164-173-11	CERAMIC CHIP	0.0039µF	10%	50V
C9524	1-164-173-11	CERAMIC CHIP	0.0039µF	10%	50V
C9525	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9526	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9527	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9528	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9531	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9532	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9540	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9541	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9542	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9543	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9546	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9547	1-164-392-11	CERAMIC CHIP	390pF	5%	50V
C9548	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C9549	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C9550	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9552	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C9553	1-126-947-11	ELECT	47µF	20%	25V
C9554	1-126-947-11	ELECT	47µF	20%	25V
C9555	1-126-947-11	ELECT	47µF	20%	25V
C9556	1-126-916-11	ELECT	1000µF	20%	6.3V
C9557	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9558	1-126-933-11	ELECT	100µF	20%	16V
C9559	1-164-156-11	CERAMIC CHIP	0.1µF		25V

CONNECTOR

CN9400	1-573-301-21	CONNECTOR, BOARD TO BOARD	20P
CN9401	1-573-301-21	CONNECTOR, BOARD TO BOARD	20P
* CN9402	1-564-511-11	PLUG,CONNEC2TOR	8P

REF. NO.	PART NO.	DESCRIPTION	VALUES

DIODE

D9400	8-719-988-61	DIODE 1SS355TE-17
D9401	8-719-988-61	DIODE 1SS355TE-17
D9402	8-719-988-61	DIODE 1SS355TE-17
D9404	8-719-988-61	DIODE 1SS355TE-17
D9405	8-719-988-61	DIODE 1SS355TE-17
D9406	8-719-069-54	DIODE UDZSTE-175.1B
D9407	8-719-069-54	DIODE UDZSTE-175.1B
D9408	8-719-069-54	DIODE UDZSTE-175.1B
D9409	8-719-069-54	DIODE UDZSTE-175.1B

FERRITE BEAD

FB9401	1-414-445-11	FERRITE	0µH
FB9402	1-414-445-11	FERRITE	0µH
FB9403	1-414-445-11	FERRITE	0µH
FB9404	1-414-445-11	FERRITE	0µH
FB9405	1-414-445-11	FERRITE	0µH
FB9406	1-414-445-11	FERRITE	0µH
FB9407	1-414-445-11	FERRITE	0µH
FB9408	1-414-445-11	FERRITE	0µH
FB9409	1-414-445-11	FERRITE	0µH
FB9410	1-414-445-11	FERRITE	0µH
FB9411	1-414-445-11	FERRITE	0µH
FB9412	1-414-445-11	FERRITE	0µH
FB9413	1-414-445-11	FERRITE	0µH
FB9414	1-414-445-11	FERRITE	0µH
FB9415	1-414-445-11	FERRITE	0µH
FB9416	1-414-445-11	FERRITE	0µH
FB9417	1-414-445-11	FERRITE	0µH

IC

IC9400	8-752-932-80	IC CXP86460-645Q
IC9401	8-759-683-55	IC CM0017AF
IC9402	6-700-319-01	IC M24128-BWMN6T
IC9403	8-759-352-91	IC PST9143NL
IC9405	8-759-830-08	IC NJM2068V-TE2
IC9406	8-759-830-08	IC NJM2068V-TE2
IC9407	8-759-829-87	IC CD0031AM
IC9408	8-759-830-08	IC NJM2068V-TE2
IC9409	8-759-830-08	IC NJM2068V-TE2
IC9410	8-759-830-08	IC NJM2068V-TE2
IC9411	8-759-830-08	IC NJM2068V-TE2
IC9413	8-759-278-58	IC NJM4558V-TE2
IC9414	8-759-278-58	IC NJM4558V-TE2

REF. NO.	PART NO.	DESCRIPTION	VALUES		
IC9415	8-759-278-58	IC NJM4558V-TE2			
IC9416	8-759-278-58	IC NJM4558V-TE2			
IC9420	8-759-830-08	IC NJM2068V-TE2			
IC9422	8-759-641-26	IC NJM2391DL1-33(TE1)			
	COIL				
L9401	1-469-555-21	INDUCTOR	10µH		
	TRANSISTOR				
Q9400	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9401	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9402	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9403	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9405	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9406	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9407	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9408	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9411	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9412	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9413	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9414	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9415	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR			
Q9416	8-729-028-28	TRANSISTOR 2SK2036(TE85L)			
Q9417	8-729-028-28	TRANSISTOR 2SK2036(TE85L)			
	RESISTOR				
R9400	1-216-841-11	RES-CHIP	47K	5%	1/10W
R9401	1-216-809-11	RES-CHIP	100	5%	1/10W
R9402	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9403	1-216-864-11	SHORT CHIP	0		
R9404	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9405	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9406	1-216-837-11	RES-CHIP	22K	5%	1/10W
R9407	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9408	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9410	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R9411	1-216-809-11	RES-CHIP	100	5%	1/10W
R9412	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R9413	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R9414	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R9415	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9416	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R9417	1-216-809-11	RES-CHIP	100	5%	1/10W
R9418	1-216-809-11	RES-CHIP	100	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R9419	1-216-839-11	RES-CHIP	33K	5%	1/10W
R9420	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9421	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9422	1-216-818-11	RES-CHIP	560	5%	1/10W
R9423	1-216-809-11	RES-CHIP	100	5%	1/10W
R9424	1-216-809-11	RES-CHIP	100	5%	1/10W
R9425	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9426	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9428	1-216-809-11	RES-CHIP	100	5%	1/10W
R9429	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R9430	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9431	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R9432	1-216-815-11	RES-CHIP	330	5%	1/10W
R9433	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R9434	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9435	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R9436	1-216-809-11	RES-CHIP	100	5%	1/10W
R9437	1-216-809-11	RES-CHIP	100	5%	1/10W
R9438	1-216-815-11	RES-CHIP	330	5%	1/10W
R9439	1-216-815-11	RES-CHIP	330	5%	1/10W
R9440	1-216-817-11	RES-CHIP	470	5%	1/10W
R9441	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R9442	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9443	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R9444	1-216-837-11	RES-CHIP	22K	5%	1/10W
R9446	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9447	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9448	1-216-818-11	RES-CHIP	560	5%	1/10W
R9449	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R9450	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R9451	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9452	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9453	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9454	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9455	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16
R9456	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9457	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9458	1-216-839-11	RES-CHIP	33K	5%	1/10W
R9459	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R9460	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R9461	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R9462	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R9463	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R9464	1-218-716-11	METAL CHIP	10K	0.50%	1/16W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R9465	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R9466	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R9467	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9468	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9469	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9470	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9471	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R9472	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R9473	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R9474	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R9475	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R9476	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R9477	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R9478	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R9479	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9480	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9481	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9482	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R9483	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R9484	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R9485	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R9486	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R9487	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R9488	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R9489	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R9490	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R9494	1-216-855-11	RES-CHIP	680K	5%	1/10W
R9495	1-216-853-11	RES-CHIP	470K	5%	1/10W
R9496	1-216-853-11	RES-CHIP	470K	5%	1/10W
R9497	1-216-855-11	RES-CHIP	680K	5%	1/10W
R9502	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R9503	1-216-845-11	RES-CHIP	100K	5%	1/10W
R9504	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R9505	1-216-843-11	RES-CHIP	68K	5%	1/10W
R9509	1-216-843-11	RES-CHIP	68K	5%	1/10W
R9510	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R9511	1-216-845-11	RES-CHIP	100K	5%	1/10W
R9512	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R9515	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9516	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9520	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9527	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9539	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R9540	1-218-702-11	METAL CHIP	2.7K	0.50%	1/16W
R9541	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R9542	1-218-714-11	METAL CHIP	8.2K	0.50%	1/16W
R9545	1-216-839-11	RES-CHIP	33K	5%	1/10W
R9546	1-218-720-11	METAL CHIP	15K	0.50%	1/16W
R9548	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R9549	1-218-722-11	METAL CHIP	18K	0.50%	1/16W
R9550	1-216-837-11	RES-CHIP	22K	5%	1/10W
R9551	1-216-809-11	RES-CHIP	100	5%	1/10W
R9553	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9554	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9555	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9556	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9557	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9558	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9559	1-216-821-11	RES-CHIP	1K	5%	1/10W
R9565	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9566	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9567	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9568	1-216-864-11	SHORT CHIP	0		
R9569	1-216-864-11	SHORT CHIP	0		
R9570	1-216-864-11	SHORT CHIP	0		
R9571	1-216-864-11	SHORT CHIP	0		
R9572	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9573	1-216-833-11	RES-CHIP	10K	5%	1/10W
R9574	1-216-797-11	RES-CHIP	10	5%	1/10W
R9575	1-216-797-11	RES-CHIP	10	5%	1/10W

RESISTOR BRIDGE

RB9400	1-233-576-11	RES, CHIP NETWORK	100
RB9401	1-233-576-11	RES, CHIP NETWORK	100
RB9402	1-233-576-11	RES, CHIP NETWORK	100

VARISTOR

VD9404	1-804-499-21	VARISTOR, CHIP
VD9405	1-804-499-21	VARISTOR, CHIP
VD9406	1-804-499-21	VARISTOR, CHIP
VD9407	1-804-499-21	VARISTOR, CHIP

CRYSTAL

X9401	1-767-922-11	VIBRATOR, CERAMIC

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

D

REF. NO.	PART NO.	DESCRIPTION	VALUES
D			
⚠ *	A-1300-560-A	D BOARD, COMPLETE	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
	7-682-952-09	SCREW#NAME? 3X16	

The high-voltage leads associated with the FBT on the D board are not included and must be ordered separately. Order the following leads when requesting this D board:

⚠	1-779-095-51	HV LEAD ASSY
⚠	1-900-260-40	CONNECTOR ASSY., MV

CAPACITOR

C8001	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C8002	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8003	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8004	1-104-666-11	ELECT	220µF	20%	25V
C8005	1-126-942-61	ELECT	1000µF	20%	25V
C8006	1-126-942-61	ELECT	1000µF	20%	25V
C8007	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8008	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8009	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8010	1-136-177-00	FILM	1µF	5%	50V
C8011	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8012	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8013	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8014	1-104-665-11	ELECT	100µF	20%	25V
C8015	1-126-969-11	ELECT	220µF	20%	50V
C8016	1-104-665-11	ELECT	100µF	20%	25V
C8017	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C8018	1-126-964-11	ELECT	10µF	20%	50V
C8019	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8020	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8023	1-106-220-00	MYLAR	0.1µF	10%	100V
C8024	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C8025	1-126-968-11	ELECT	100µF	20%	50V
C8026	1-126-968-11	ELECT	100µF	20%	50V
C8028	1-126-968-11	ELECT	100µF	20%	50V
C8029	1-126-968-11	ELECT	100µF	20%	50V
C8031	1-107-636-11	ELECT	10µF	20%	160V
C8032	1-126-968-11	ELECT	100µF	20%	50V
C8033	1-126-968-11	ELECT	100µF	20%	50V
C8034	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8035	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8036	1-126-968-11	ELECT	100µF	20%	50V
C8037	1-126-968-11	ELECT	100µF	20%	50V
C8040	1-115-349-51	CERAMIC	0.01µF		2KV
C8041	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8042	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8045	1-126-965-91	ELECT	22µF	20%	50V
C8046	1-126-965-91	ELECT	22µF	20%	50V
C8047	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8048	1-126-965-91	ELECT	22µF	20%	50V
C8049	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8050	1-126-965-91	ELECT	22µF	20%	50V
C8051	1-102-038-00	CERAMIC	0.001µF		500V
C8052	1-126-965-91	ELECT	22µF	20%	50V
C8053	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8054	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8055	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8056	1-107-652-11	ELECT	10µF	20%	250V
C8057	1-126-959-11	ELECT	0.47µF	20%	50V
C8058	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C8059	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C8060	1-104-665-11	ELECT	100µF	20%	25V
C8061	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8062	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8063	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8064	1-107-636-11	ELECT	10µF	20%	160V
C8065	1-106-383-00	MYLAR	0.047µF	10%	200V
C8066	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8067	1-104-665-11	ELECT	100µF	20%	25V
C8068	1-162-318-11	CERAMIC	0.001µF	10%	500V
C8069	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8070	1-126-964-11	ELECT	10µF	20%	50V
C8071	1-126-964-11	ELECT	10µF	20%	50V
C8072	1-126-964-11	ELECT	10µF	20%	50V
C8073	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8074	1-104-665-11	ELECT	100µF	20%	25V
C8075	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8076	1-128-551-11	ELECT	22µF	20%	25V
C8077	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8078	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C8079	1-126-964-11	ELECT	10µF	20%	50V
C8080	1-126-964-11	ELECT	10µF	20%	50V
C8081	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C8082	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C8083	1-130-495-00	MYLAR	0.1µF	5%	50V
C8084	1-130-992-11	FILM	0.022µF	5%	50V
C8085	1-162-924-11	CERAMIC CHIP	56pF	5%	50V
C8086	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8087	1-126-960-11	ELECT	1µF	20%	50V
C8088	1-126-964-11	ELECT	10µF	20%	50V
C8089	1-162-134-11	CERAMIC	470pF	10%	2KV
C8090	1-126-960-11	ELECT	1µF	20%	50V
C8091	1-104-665-11	ELECT	100µF	20%	25V
C8092	1-117-640-11	FILM	6800pF	3%	1.2KV
C8093	1-107-648-91	ELECT	100µF	20%	160V
C8094	1-126-947-11	ELECT	47µF	20%	25V
C8095	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8096	1-136-684-51	MYLAR	0.0022µF	10%	100V
C8097	1-162-131-11	CERAMIC	220pF	10%	2KV
C8098	1-162-131-11	CERAMIC	220pF	10%	2KV
C8099	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C8100	1-104-665-11	ELECT	100µF	20%	25V
C8102	1-162-318-11	CERAMIC	0.001µF	10%	500V
C8103	1-126-964-11	ELECT	10µF	20%	50V
C8104	1-162-965-11	CERAMIC CHIP	0.0015µF	10%	50V
C8105	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8106	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8107	1-136-187-11	MYLAR	0.047µF	10%	250V
C8108	1-126-964-11	ELECT	10µF	20%	50V
C8109	1-162-924-11	CERAMIC CHIP	56pF	5%	50V
C8110	1-126-960-11	ELECT	1µF	20%	50V
C8111	1-126-960-11	ELECT	1µF	20%	50V
C8113	1-130-495-00	MYLAR	0.1µF	5%	50V
C8114	1-125-473-11	ELECT(BLOCK)	1000µF	20%	160V
C8115	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8116	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8117	1-162-318-11	CERAMIC	0.001µF	10%	500V
C8118	1-136-189-00	MYLAR	0.1µF	10%	250V
C8120	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8121	1-115-349-51	CERAMIC	0.01µF		2KV
C8122	1-126-934-11	ELECT	220µF	20%	16V
C8123	1-107-444-11	CERAMIC	100pF	10%	2KV
⚠ C8124	1-117-642-11	FILM	8200pF	3%	1.2KV
C8125	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8126	1-106-357-00	MYLAR	0.0039µF	20%	200V
C8127	1-126-942-61	ELECT	1000µF	20%	25V
C8129	1-137-150-11	MYLAR	0.01µF	5%	50V
C8131	1-128-582-11	ELECT	10µF	20%	100V
C8132	1-126-927-11	ELECT	2200µF	20%	10V
C8133	1-107-649-11	ELECT	2.2µF	20%	250V
C8135	1-117-813-11	FILM	0.75µF	5%	250V
C8136	1-130-495-00	MYLAR	0.1µF	5%	50V
C8137	1-126-927-11	ELECT	2200µF	20%	10V
C8138	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C8139	1-126-964-11	ELECT	10µF	20%	50V
C8140	1-102-030-00	CERAMIC	330pF	10%	500V
C8141	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8142	1-117-664-11	FILM	0.27µF	5%	250V
C8143	1-109-889-11	ELECT	1µF	20%	50V
C8145	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8146	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8153	1-126-960-11	ELECT	1µF	20%	50V
C8154	1-126-947-11	ELECT	47µF	20%	16V
C8155	1-126-947-11	ELECT	47µF	20%	16V
C8156	1-107-636-11	ELECT	10µF	20%	160V
C8158	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8159	1-106-383-00	MYLAR	0.047µF	10%	200V
C8160	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C8162	1-162-318-11	CERAMIC	0.001µF	10%	500V
C8163	1-126-960-11	ELECT	1µF	20%	50V
C8165	1-126-965-91	ELECT	22µF	20%	50V

CONNECTOR

*	CN8003	1-691-135-11	PIN,CONNECTOR (PC BOARD)	4P
*	CN8006	1-564-506-11	PLUG,CONNECTOR	3P
*	CN8007	1-564-506-11	PLUG,CONNECTOR	3P
*	CN8008	1-564-506-11	PLUG,CONNECTOR	3P
*	CN8009	1-564-506-11	PLUG,CONNECTOR	3P
*	CN8010	1-564-507-11	PLUG,CONNECTOR	4P
*	CN8011	1-564-507-11	PLUG,CONNECTOR	4P
*	CN8012	1-564-507-11	PLUG,CONNECTOR	4P
	CN8013	1-779-092-11	PIN,CONNECTOR (PC BOARD)	10P
*	CN8015	1-506-371-00	PIN,CONNECTOR	2P
*	CN8016	1-564-507-11	PLUG,CONNECTOR	4P
*	CN8018	1-580-689-11	PIN,CONNECTOR (PC BOARD)	4P
*	CN8019	1-580-689-11	PIN,CONNECTOR (PC BOARD)	4P
*	CN8020	1-580-689-11	PIN,CONNECTOR (PC BOARD)	4P
*	CN8022	1-564-510-11	PLUG,CONNECTOR	7P
*	CN8023	1-564-507-11	PLUG,CONNECTOR	4P
*	CN8025	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P
	CN8026	1-573-298-21	CONNECTOR, BOARD TO BOARD	20P
	CN8027	1-573-298-21	CONNECTOR, BOARD TO BOARD	20P

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	REF. NO.	PART NO.	DESCRIPTION	VALUES
*	CN8028	1-564-507-11	PLUG,CONNECTOR	4P
*	CN8029	1-564-510-11	PLUG,CONNECTOR	7P
*	CN8030	1-564-510-11	PLUG,CONNECTOR	7P
*	CN8031	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P
		DIODE		
	D8001	8-719-109-89	DIODE MTZJ-T-77-5.6B	
	D8002	8-719-110-53	DIODE MTZJ-T-77-20B	
	D8003	8-719-924-13	DIODE MTZJ-T-77-22B	
	D8004	8-719-908-03	DIODE GP08DPKG23	
	D8005	8-719-988-61	DIODE 1SS355TE-17	
	D8006	8-719-988-61	DIODE 1SS355TE-17	
	D8008	8-719-988-61	DIODE 1SS355TE-17	
	D8010	8-719-988-61	DIODE 1SS355TE-17	
	D8011	8-719-988-61	DIODE 1SS355TE-17	
	D8012	8-719-988-61	DIODE 1SS355TE-17	
	D8013	8-719-109-85	DIODE MTZJ-T-77-5.1B	
	D8014	8-719-109-85	DIODE MTZJ-T-77-5.1B	
	D8015	8-719-988-61	DIODE 1SS355TE-17	
	D8016	8-719-988-61	DIODE 1SS355TE-17	
	D8019	8-719-988-61	DIODE 1SS355TE-17	
	D8020	8-719-988-61	DIODE 1SS355TE-17	
	D8022	8-719-988-61	DIODE 1SS355TE-17	
	D8023	8-719-988-61	DIODE 1SS355TE-17	
	D8024	8-719-110-41	DIODE MTZJ-T-77-15B	
	D8025	8-719-988-61	DIODE 1SS355TE-17	
	D8026	8-719-109-89	DIODE MTZJ-T-77-5.6B	
	D8027	8-719-028-45	DIODE D2L20U-TA	
	D8028	8-719-110-41	DIODE MTZJ-T-77-15B	
	D8029	8-719-027-43	DIODE S2L20μF	
	D8030	8-719-027-43	DIODE S2L20μF	
	D8032	8-719-302-43	DIODE RGP10GPKG23	
	D8033	8-719-028-72	DIODE RGP02-17EL-6433	
	D8036	8-719-110-41	DIODE MTZJ-T-77-15B	
	D8037	8-719-028-45	DIODE D2L20U-F	
	D8038	8-719-302-43	DIODE RGP10GPKG23	
	D8039	8-719-028-72	DIODE RGP02-17PKG23	
	D8042	8-719-988-61	DIODE 1SS355TE-17	
	D8043	8-719-988-61	DIODE 1SS355TE-17	
	D8045	8-719-908-03	DIODE GP08DPKG23	
	D8047	8-719-988-61	DIODE 1SS355TE-17	
	D8050	8-719-988-61	DIODE 1SS355TE-17	
	D8051	8-719-988-61	DIODE 1SS355TE-17	
	D8052	8-719-988-61	DIODE 1SS355TE-17	

REF. NO.	PART NO.	DESCRIPTION	VALUES
	FERRITE BEAD		
FB8001	1-410-397-21	FERRITE	1.1μH
FB8002	1-410-397-21	FERRITE	1.1μH
FB8005	1-469-869-21	FERRITE	0μH
FB8006	1-469-869-21	FERRITE	0μH
FB8014	1-469-869-21	FERRITE	0μH
FB8015	1-469-869-21	FERRITE	0μH
FB8016	1-469-869-21	FERRITE	0μH
FB8017	1-469-869-21	FERRITE	0μH
FB8018	1-469-869-21	FERRITE	0μH
FB8021	1-410-397-21	FERRITE	1.1μH
FB8022	1-410-396-41	FERRITE	0.45μH
FB8023	1-410-396-41	FERRITE	0.45μH
	IC		
IC8001	8-749-019-08	IC STK392-560	
IC8002	8-749-019-08	IC STK392-560	
IC8003	8-759-593-33	IC LA78045	
IC8004	8-759-701-79	IC NJM7812FA	
IC8005	8-759-585-82	IC BA9759F-E2	
IC8006	8-759-700-07	IC NJM2903M-TE2	
IC8007	8-759-700-07	IC NJM2903M-TE2	
IC8008	8-759-585-82	IC BA9759F-E2	
IC8009	8-759-803-42	IC LA6500P-FA	
IC8010	8-759-471-81	IC PQ05RD11	
IC8012	8-759-701-01	IC NJM2904M(TE2)	
	COIL		
L8001	1-412-533-21	INDUCTOR	47μH
L8002	1-412-533-21	INDUCTOR	47μH
L8003	1-412-525-31	INDUCTOR	10μH
L8004	1-412-533-21	INDUCTOR	47μH
L8005	1-412-533-21	INDUCTOR	47μH
L8006	1-412-525-31	INDUCTOR	10μH
L8007	1-412-533-21	INDUCTOR	47μH
L8008	1-412-533-21	INDUCTOR	47μH
L8009	1-412-525-31	INDUCTOR	10μH
L8010	1-414-187-11	INDUCTOR	47μH
L8011	1-414-856-11	INDUCTOR	10μH
L8012	1-414-187-11	INDUCTOR	47μH
L8013	1-414-856-11	INDUCTOR	10μH
L8014	1-414-189-31	INDUCTOR	100μH
L8015	1-414-189-31	INDUCTOR	100μH

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REF. NO.	PART NO.	DESCRIPTION	VALUES
L8016	1-412-537-31	INDUCTOR	100µH
L8017	1-414-856-11	INDUCTOR	10µH
L8018	1-406-667-11	INDUCTOR	220µH
L8019	1-456-109-11	COIL,HORIZONTAL LINEARITY(HLC)	
L8020	1-412-525-31	INDUCTOR	10µH
L8021	1-406-659-11	INDUCTOR	10µH
L8022	1-412-552-11	INDUCTOR	2.2MH
L8025	1-414-856-11	INDUCTOR	10µH
L8026	1-414-856-11	INDUCTOR	10µH
L8028	1-414-187-11	INDUCTOR	47µH
L8029	1-414-187-11	INDUCTOR	47µH
L8030	1-414-187-11	INDUCTOR	47µH
L8031	1-414-187-11	INDUCTOR	47µH
L8032	1-414-856-11	INDUCTOR	10µH
L8033	1-414-856-11	INDUCTOR	10µH
	NEON LAMP		
NL8001	1-517-778-21	LAMP, NEON	
	IC LINK		
⚠ PS8001	1-533-595-31	LINK, IC	
⚠ PS8002	1-533-595-31	LINK, IC	
⚠ PS8003	1-533-595-31	LINK, IC	
⚠ PS8004	1-533-595-31	LINK, IC	
⚠ PS8005	1-533-595-31	LINK, IC	
⚠ PS8006	1-533-595-31	LINK, IC	
⚠ PS8007	1-533-594-31	LINK, IC	
PS8008	1-532-685-00	LINK, IC	0.8A/150V
	TRANSISTOR		
Q8001	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8002	8-729-046-80	TRANSISTOR 2SC4634LS-CB11	
Q8003	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8004	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8007	8-729-046-80	TRANSISTOR 2SC4634LS-CB11	
Q8008	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q8009	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q8010	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8011	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8014	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8015	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8016	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8019	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8020	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	

REF. NO.	PART NO.	DESCRIPTION	VALUES
Q8021	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8022	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8023	8-729-048-47	TRANSISTOR 2SC2688(5)-LK	
Q8024	6-550-144-01	TRANSISTOR 2SC5778-YB	
Q8027	6-550-153-01	TRANSISTOR FQpF12P20XDTU	
Q8028	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8029	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8030	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8031	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8035	6-550-153-01	TRANSISTOR FQpF12P20XDTU	
Q8039	8-729-048-47	TRANSISTOR 2SC2688(5)-LK	
Q8041	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8042	8-729-048-47	TRANSISTOR 2SC2688(5)-LK	
Q8043	6-550-144-01	TRANSISTOR 2SC5778-YB	
Q8044	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q8101	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
	RESISTOR		
R8001	1-216-825-11	RES-CHIP	2.2K 5% 1/10W
R8002	1-216-809-11	RES-CHIP	100 5% 1/10W
R8003	1-216-809-11	RES-CHIP	100 5% 1/10W
R8004	1-216-809-11	RES-CHIP	100 5% 1/10W
R8005	1-215-875-11	METAL OXIDE	10K 5% 1W
R8007	1-216-809-11	RES-CHIP	100 5% 1/10W
R8008	1-216-809-11	RES-CHIP	100 5% 1/10W
R8009	1-216-809-11	RES-CHIP	100 5% 1/10W
R8010	1-260-131-11	CARBON	470K 5% 1/2W
R8011	1-216-829-11	RES-CHIP	4.7K 5% 1/10W
R8012	1-216-829-11	RES-CHIP	4.7K 5% 1/10W
R8013	1-218-710-11	METAL CHIP	5.6K 0.50% 1/16W
R8014	1-218-710-11	METAL CHIP	5.6K 0.50% 1/16W
R8015	1-216-837-11	RES-CHIP	22K 5% 1/10W
R8016	1-216-829-11	RES-CHIP	4.7K 5% 1/10W
R8017	1-216-829-11	RES-CHIP	4.7K 5% 1/10W
R8018	1-216-821-11	RES-CHIP	1K 5% 1/10W
R8019	1-218-712-11	METAL CHIP	6.8K 0.50% 1/16W
R8020	1-216-829-11	RES-CHIP	4.7K 5% 1/10W
⚠ R8021	1-216-833-11	RES-CHIP	10K 5% 1/10W
R8022	1-216-839-11	RES-CHIP	33K 5% 1/10W
R8023	1-216-833-11	RES-CHIP	10K 5% 1/10W
R8024	1-216-833-11	RES-CHIP	10K 5% 1/10W
R8025	1-216-829-11	RES-CHIP	4.7K 5% 1/10W
R8026	1-216-829-11	RES-CHIP	4.7K 5% 1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8029	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R8030	1-215-903-11	METAL OXIDE	68K	5%	2W
R8031	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R8032	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8033	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8034	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8035	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R8036	1-214-800-11	METAL	2.2	1%	1/2W
R8037	1-215-903-11	METAL OXIDE	68K	5%	2W
R8038	1-216-809-11	RES-CHIP	100	5%	1/10W
R8039	1-214-800-11	METAL	2.2	1%	1/2W
R8040	1-215-913-11	METAL OXIDE	220	5%	3W
R8041	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R8042	1-216-826-11	RES-CHIP	2.7K	5%	1/10W
R8043	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R8044	1-218-712-11	METAL CHIP	6.8K	0.50%	1/16W
R8045	1-214-808-11	METAL	4.7	1%	1/2W
R8046	1-214-808-11	METAL	4.7	1%	1/2W
R8047	1-215-857-71	METAL OXIDE	10	5%	1W
R8048	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8050	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8051	1-214-808-11	METAL	4.7	1%	1/2W
R8053	1-214-808-11	METAL	4.7	1%	1/2W
R8055	1-218-748-11	METAL CHIP	220K	0.50%	1/16W
R8056	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R8057	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R8058	1-216-809-11	RES-CHIP	100	5%	1/10W
R8059	1-214-808-11	METAL	4.7	1%	1/2W
R8060	1-214-808-11	METAL	4.7	1%	1/2W
R8061	1-216-392-11	METAL OXIDE	1.8	5%	3W
R8062	1-260-107-11	CARBON	4.7K	5%	1/2W
R8063	1-214-808-11	METAL	4.7	1%	1/2W
R8064	1-214-808-11	METAL	4.7	1%	1/2W
R8065	1-260-328-11	CARBON	1K	5%	1/2W
R8066	1-214-808-11	METAL	4.7	1%	1/2W
R8067	1-214-808-11	METAL	4.7	1%	1/2W
R8068	1-216-809-11	RES-CHIP	100	5%	1/10W
R8069	1-214-808-11	METAL	4.7	1%	1/2W
R8070	1-214-808-11	METAL	4.7	1%	1/2W
R8071	1-215-381-00	METAL	22	1%	1/4W
R8073	1-214-808-11	METAL	4.7	1%	1/2W
R8075	1-214-808-11	METAL	4.7	1%	1/2W
R8076	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R8077	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R8078	1-214-808-11	METAL	4.7	1%	1/2W
R8079	1-214-808-11	METAL	4.7	1%	1/2W
R8080	1-216-353-00	METAL OXIDE	2.2	5%	1W
R8081	1-214-808-11	METAL	4.7	1%	1/2W
R8082	1-214-808-11	METAL	4.7	1%	1/2W
R8083	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8084	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8085	1-214-808-11	METAL	4.7	1%	1/2W
R8086	1-214-808-11	METAL	4.7	1%	1/2W
⚠ R8087	1-249-385-11	CARBON	2.2	5%	1/4W
⚠ R8088	1-249-385-11	CARBON	2.2	5%	1/4W
R8089	1-214-808-11	METAL	4.7	1%	1/2W
R8090	1-214-808-11	METAL	4.7	1%	1/2W
R8091	1-214-808-11	METAL	4.7	1%	1/2W
R8092	1-214-808-11	METAL	4.7	1%	1/2W
R8093	1-214-808-11	METAL	4.7	1%	1/2W
R8094	1-214-808-11	METAL	4.7	1%	1/2W
R8095	1-216-801-11	RES-CHIP	22	5%	1/10W
R8096	1-216-801-11	RES-CHIP	22	5%	1/10W
R8097	1-214-808-11	METAL	4.7	1%	1/2W
R8098	1-214-808-11	METAL	4.7	1%	1/2W
R8100	1-216-475-11	METAL OXIDE	120	5%	3W
R8101	1-216-475-11	METAL OXIDE	120	5%	3W
R8102	1-218-734-11	METAL CHIP	56K	0.50%	1/16W
R8103	1-216-816-11	RES-CHIP	390	5%	1/10W
R8104	1-216-828-11	RES-CHIP	3.9K	5%	1/10W
R8105	1-214-808-11	METAL	4.7	1%	1/2W
R8106	1-214-808-11	METAL	4.7	1%	1/2W
R8109	1-216-813-11	RES-CHIP	220	5%	1/10W
R8110	1-249-424-11	CARBON	3.9K	5%	1/4W
R8111	1-216-819-11	RES-CHIP	680	5%	1/10W
R8112	1-216-824-11	RES-CHIP	1.8K	5%	1/10W
R8113	1-216-475-11	METAL OXIDE	120	5%	3W
R8114	1-216-475-11	METAL OXIDE	120	5%	3W
R8115	1-216-475-11	METAL OXIDE	120	5%	3W
R8116	1-216-475-11	METAL OXIDE	120	5%	3W
R8117	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8118	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8119	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8120	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8121	1-216-809-11	RES-CHIP	100	5%	1/10W
R8123	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8124	1-249-377-11	CARBON	0.47	5%	1/4W
R8125	1-216-816-11	RES-CHIP	390	5%	1/10W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8126	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R8127	1-216-341-11	METAL OXIDE	0.22	5%	1W
R8128	1-216-845-11	RES-CHIP	100K	5%	1/10W
R8129	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R8130	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R8131	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8132	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8133	1-215-923-00	METAL OXIDE	10K	5%	3W
R8134	1-215-873-00	METAL OXIDE	4.7K	5%	1W
R8135	1-215-923-00	METAL OXIDE	10K	5%	3W
R8136	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8137	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R8138	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8139	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R8140	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8141	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R8142	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8143	1-218-734-11	METAL CHIP	56K	0.50%	1/16W
R8144	1-216-809-11	RES-CHIP	100	5%	1/10W
R8145	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R8146	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R8147	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R8148	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R8149	1-249-401-11	CARBON	47	5%	1/4W
R8150	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R8151	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R8152	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R8153	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R8154	1-218-728-11	METAL CHIP	33K	0.50%	1/16W
R8155	1-215-469-00	METAL	100K	1%	1/4W
R8156	1-215-469-00	METAL	100K	1%	1/4W
R8157	1-218-738-11	METAL CHIP	82K	0.50%	1/16W
R8159	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8161	1-216-845-11	RES-CHIP	100K	5%	1/10W
R8162	1-249-377-11	CARBON	0.47	5%	1/4W
R8163	1-216-845-11	RES-CHIP	100K	5%	1/10W
R8164	1-218-734-11	METAL CHIP	56K	0.50%	1/16W
R8165	1-249-425-11	CARBON	4.7K	5%	1/4W
R8166	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R8168	1-216-809-11	RES-CHIP	100	5%	1/10W
R8169	1-216-845-11	RES-CHIP	100K	5%	1/10W
R8170	1-218-712-11	METAL CHIP	6.8K	0.50%	1/16W
R8171	1-216-809-11	RES-CHIP	100	5%	1/10W
⚠ R8172	1-249-405-11	CARBON	100	5%	1/4W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8173	1-216-845-11	RES-CHIP	100K	5%	1/10W
R8174	1-249-425-11	CARBON	4.7K	5%	1/4W
R8176	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R8178	1-216-841-11	RES-CHIP	47K	5%	1/10W
R8180	1-216-845-11	RES-CHIP	100K	5%	1/10W
R8181	1-216-845-11	RES-CHIP	100K	5%	1/10W
R8182	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R8183	1-218-740-11	METAL CHIP	100K	0.50%	1/16W
R8189	1-249-377-11	CARBON	0.47	5%	1/4W
R8190	1-215-429-00	METAL	2.2K	1%	1/4W
R8191	1-215-415-00	METAL	560	1%	1/4W
R8192	1-215-445-00	METAL	10K	1%	1/4W
R8193	1-215-445-00	METAL	10K	1%	1/4W
R8194	1-215-445-00	METAL	10K	1%	1/4W
R8195	1-215-445-00	METAL	10K	1%	1/4W
R8196	1-249-425-11	CARBON	4.7K	5%	1/4W
R8198	1-215-445-00	METAL	10K	1%	1/4W
R8201	1-249-397-11	CARBON	22	5%	1/4W
R8202	1-260-092-11	CARBON	270	5%	1/2W
⚠ R8205	1-249-377-11	CARBON	0.47	5%	1/4W
R8206	1-249-377-11	CARBON	0.47	5%	1/4W
R8208	1-260-288-11	CARBON	0.47	5%	1/2W
R8209	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8210	1-216-809-11	RES-CHIP	100	5%	1/10W
R8211	1-215-906-11	METAL OXIDE	15	5%	3W
R8212	1-215-907-11	METAL OXIDE	22	5%	3W
R8213	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8216	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8217	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8218	1-260-123-11	CARBON	100K	5%	1/2W
⚠ R8219	1-249-377-11	CARBON	0.47	5%	1/4W
R8220	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8222	1-216-341-11	METAL OXIDE	0.22	5%	1W
R8223	1-218-752-11	METAL CHIP	330K	0.50%	1/16W
R8224	1-260-127-11	CARBON	220K	5%	1/2W
⚠ R8225	1-260-292-11	CARBON	1	5%	1/2W
⚠ R8228	1-260-314-11	CARBON	68	5%	1/2W
R8230	1-218-751-11	METAL CHIP	300K	0.50%	1/16W
R8232	1-216-809-11	RES-CHIP	100	5%	1/10W
R8233	1-216-809-11	RES-CHIP	100	5%	1/10W
R8234	1-216-809-11	RES-CHIP	100	5%	1/10W
R8235	1-216-809-11	RES-CHIP	100	5%	1/10W
R8236	1-216-855-11	RES-CHIP	680K	5%	1/10W
R8237	1-216-855-11	RES-CHIP	680K	5%	1/10W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

A component identified by this ⋈ symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

D M

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8242	1-216-864-11	SHORT CHIP	0		
R8243	1-216-809-11	RES-CHIP	100	5%	1/10W
R8249	1-215-923-00	METAL OXIDE	10K	5%	3W
R8250	1-215-923-00	METAL OXIDE	10K	5%	3W
R8251	1-216-821-11	RES-CHIP	1K	5%	1/10W
R8253	1-216-816-11	RES-CHIP	390	5%	1/10W
R8254	1-216-823-11	RES-CHIP	1.5K	5%	1/10W
R8255	1-215-873-00	METAL OXIDE	4.7K	5%	1W
R8256	1-249-401-11	CARBON	47	5%	1/4W
R8258	1-216-833-11	RES-CHIP	10K	5%	1/10W
R8259	1-216-809-11	RES-CHIP	100	5%	1/10W
R8260	1-216-845-11	RES-CHIP	100K	5%	1/10W
R8261	1-216-845-11	RES-CHIP	100K	5%	1/10W
R8262	1-216-845-11	RES-CHIP	100K	5%	1/10W
R8263	1-216-845-11	RES-CHIP	100K	5%	1/10W
		TRANSFORMER			
T8001	1-437-708-11	TRANSFORMER, FERRITE (DFT)			
T8002	1-437-739-11	TRANSFORMER, FERRITE (HDT)			
T8003	1-437-401-11	TRANSFORMER, FERRITE (HOT)			
⚠ T8004	1-437-399-21	TRANSFORMER, FERRITE (LOT)			
⚠ T8005	1-453-285-51	FBT ASSY NX-4006//X4P4			
T8006	1-437-739-11	TRANSFORMER, FERRITE (HDT)			
		THERMISTOR			
TH8001	1-800-193-00	THERMISTOR			
		VARIABLE RESISTOR			
⋈ ⚠VR8001	1-225-627-91	RES, VAR, ADJ, CERMET	2K		
⋈ ⚠VR8002	1-225-630-91	RES, VAR, ADJ, CERMET	20K		

M

The M board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

*	**A-1300-646-A**	**M BOARD, COMPLETE**			
		CAPACITOR			
C2001	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C2002	1-126-933-11	ELECT	100µF	20%	16V
C2003	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2004	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C2005	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C2006	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2007	1-126-964-11	ELECT	10µF	20%	50V
C2010	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2011	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2012	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2014	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2015	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2017	1-126-964-11	ELECT	10µF	20%	50V
C2019	1-126-964-11	ELECT	10µF	20%	50V
C2020	1-126-964-11	ELECT	10µF	20%	50V
C2022	1-126-964-11	ELECT	10µF	20%	50V
C2024	1-126-933-11	ELECT	100µF	20%	16V
C2025	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2027	1-126-964-11	ELECT	10µF	20%	50V
C2028	1-126-933-11	ELECT	100µF	20%	16V
C2029	1-126-964-11	ELECT	10µF	20%	50V
C2031	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2032	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2033	1-126-933-11	ELECT	100µF	20%	16V
C2034	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C2035	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C2036	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2037	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2038	1-162-916-11	CERAMIC CHIP	12pF	5%	50V
C2039	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2040	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2041	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2042	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2043	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2044	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C2045	1-126-933-11	ELECT	100µF	20%	16V
C2046	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2047	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2048	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C2049	1-162-916-11	CERAMIC CHIP	12pF	5%	50V
C2050	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2051	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C2052	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2053	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2054	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2055	1-126-933-11	ELECT	100µF	20%	16V
C2056	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2057	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2058	1-126-963-11	ELECT	4.7µF	20%	50V

M

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C2059	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2060	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2061	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2062	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2063	1-126-963-11	ELECT	4.7µF	20%	50V
C2064	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2065	1-126-933-11	ELECT	100µF	20%	16V
C2066	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2067	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2068	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2069	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2070	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2071	1-126-963-11	ELECT	4.7µF	20%	50V
C2072	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2073	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2074	1-126-933-11	ELECT	100µF	20%	16V
C2075	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2076	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2077	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2078	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2079	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2080	1-126-963-11	ELECT	4.7µF	20%	50V
C2081	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2082	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2083	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2084	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2085	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2086	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2087	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2088	1-216-864-11	SHORT CHIP	0		
C2089	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2090	1-216-864-11	SHORT CHIP	0		
C2096	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2097	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2098	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C2099	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C2100	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2101	1-126-933-11	ELECT	100µF	20%	16V
C2102	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2103	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2104	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2105	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2106	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2107	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2108	1-126-933-11	ELECT	100µF	20%	16V
C2109	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C2111	1-126-964-11	ELECT	10µF	20%	50V
C2112	1-126-964-11	ELECT	10µF	20%	50V
C2113	1-126-964-11	ELECT	10µF	20%	50V
C2114	1-126-964-11	ELECT	10µF	20%	50V
C2115	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2116	1-126-933-11	ELECT	100µF	20%	16V
C2117	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2120	1-126-964-11	ELECT	10µF	20%	50V
C2121	1-126-964-11	ELECT	10µF	20%	50V
C2122	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C2123	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C2124	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2126	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2130	1-126-933-11	ELECT	100µF	20%	16V
C2131	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2132	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2134	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2135	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C2200	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2201	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2202	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2204	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2205	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2206	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2207	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2208	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2209	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2210	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2211	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2212	1-126-933-11	ELECT	100µF	20%	16V
C2213	1-126-947-11	ELECT	47µF	20%	25V
C2214	1-126-933-11	ELECT	100µF	20%	16V
C2215	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2216	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2217	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2218	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2219	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2220	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2221	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C2222	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C2223	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C2224	1-115-156-11	CERAMIC CHIP	1µF		10V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C2225	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C2226	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2227	1-126-933-11	ELECT	100µF	20%	16V
C2228	1-162-913-11	CERAMIC CHIP	8pF	0.50pF	50V
C2229	1-162-913-11	CERAMIC CHIP	8pF	0.50pF	50V
C2230	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C2231	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C2232	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2233	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2234	1-126-933-11	ELECT	100µF	20%	16V
C2235	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2236	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2237	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C2238	1-126-933-11	ELECT	100µF	20%	16V
C2239	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2240	1-126-933-11	ELECT	100µF	20%	16V
C2241	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2242	1-126-934-11	ELECT	220µF	20%	16V
C2243	1-126-934-11	ELECT	220µF	20%	16V
C2244	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2245	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2246	1-126-947-11	ELECT	47µF	20%	25V
C2247	1-162-975-11	CERAMIC CHIP	24pF	5%	50V
C2248	1-162-975-11	CERAMIC CHIP	24pF	5%	50V
C2249	1-164-360-11	CERAMIC CHIP	0.1µF		16V
C2250	1-164-360-11	CERAMIC CHIP	0.1µF		16V
C2251	1-164-392-11	CERAMIC CHIP	390pF	5%	50V
C2300	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C2301	1-126-933-11	ELECT	100µF	20%	16V
C2302	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2305	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2306	1-162-920-11	CERAMIC CHIP	27pF	5%	50V
C2307	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C2308	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2309	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2310	1-162-919-11	CERAMIC CHIP	22pF	5%	50V
C2311	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2312	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C2313	1-115-156-11	CERAMIC CHIP	1µF		10V
C2315	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2317	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2318	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2319	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2321	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2322	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2323	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2324	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2325	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2326	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2327	1-126-933-11	ELECT	100µF	20%	16V
C2328	1-126-933-11	ELECT	100µF	20%	16V
C2329	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2330	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2331	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2332	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2333	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2334	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2335	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2336	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2337	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2338	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C2339	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2340	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2341	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2342	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2343	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2344	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C2345	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2346	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C2347	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2348	1-126-933-11	ELECT	100µF	20%	16V
C2349	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C2352	1-126-933-11	ELECT	100µF	20%	16V
C2353	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2354	1-162-907-11	CERAMIC CHIP	2pF	0.25pF	50V
C2355	1-164-245-11	CERAMIC CHIP	0.015µF	10%	25V
C2358	1-126-935-11	ELECT	470µF	20%	6.3V
C2359	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2361	1-126-933-11	ELECT	100µF	20%	16V
C2362	1-126-933-11	ELECT	100µF	20%	16V
C2370	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2500	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C2501	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C2503	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2504	1-126-933-11	ELECT	100µF	20%	16V
C2506	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2508	1-126-933-11	ELECT	100µF	20%	16V
C2510	1-162-960-11	CERAMIC CHIP	220pF	10%	50V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
C2512	1-135-834-91	CERAMIC CHIP	2.2E+06pF		6.3V
C2513	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C2514	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2515	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2516	1-126-933-11	ELECT	100µF	20%	16V
C2517	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C2518	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C2519	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2520	1-162-960-11	CERAMIC CHIP	220pF	10%	50V
C2521	1-162-960-11	CERAMIC CHIP	220pF	10%	50V
C2522	1-126-947-11	ELECT	47µF	20%	25V
C2523	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2524	1-135-834-91	CERAMIC CHIP	2.2E+06pF		6.3V
C2525	1-135-834-91	CERAMIC CHIP	2.2E+06pF		6.3V
C2527	1-135-834-91	CERAMIC CHIP	2.2E+06pF		6.3V
C2528	1-162-962-11	CERAMIC CHIP	470pF	10%	50V
C2530	1-126-947-11	ELECT	47µF	20%	25V
C2532	1-135-834-91	CERAMIC CHIP	2.2E+06pF		6.3V
C2533	1-162-960-11	CERAMIC CHIP	220pF	10%	50V
C2534	1-126-947-11	ELECT	47µF	20%	25V
C2535	1-162-962-11	CERAMIC CHIP	470pF	10%	50V
C2536	1-135-834-91	CERAMIC CHIP	2.2E+06pF		6.3V
C2538	1-126-947-11	ELECT	47µF	20%	25V
C2539	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2540	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C2541	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C2542	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2543	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2544	1-126-963-11	ELECT	4.7µF	20%	50V
C2545	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C2546	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C2548	1-126-947-11	ELECT	47µF	20%	25V
C2549	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2550	1-126-963-11	ELECT	4.7µF	20%	50V
C2551	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2553	1-126-947-11	ELECT	47µF	20%	25V
C2554	1-126-947-11	ELECT	47µF	20%	25V
C2558	1-126-963-11	ELECT	4.7µF	20%	50V
C2559	1-126-933-11	ELECT	100µF	20%	16V
C2560	1-126-947-11	ELECT	47µF	20%	25V
C2561	1-126-963-11	ELECT	4.7µF	20%	50V
C2563	1-126-961-11	ELECT	2.2µF	20%	50V
C2564	1-126-961-11	ELECT	2.2µF	20%	50V
C2565	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V

REF. NO.	PART NO.	DESCRIPTION	VALUES		
C2566	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2569	1-126-961-11	ELECT	2.2µF	20%	50V
C2570	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C2571	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C2572	1-126-960-11	ELECT	1µF	20%	50V
C2574	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V
C2575	1-126-960-11	ELECT	1µF	20%	50V
C2579	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C2582	1-126-933-11	ELECT	100µF	20%	16V
C2584	1-126-933-11	ELECT	100µF	20%	16V

CONNECTOR

CN2006	1-793-174-11	SOCKET,PCCONNECTOR (PC BOARD)
CN2304	1-764-334-11	PLUG,CONNECTOR 11P
CN2305	1-770-721-11	CONNECTOR, BOARD TO BOARD 4P

DIODE

D2300	8-719-914-43	DIODE DAN202K-T-146
D2301	8-719-914-43	DIODE DAN202K-T-146
D2302	8-719-914-44	DIODE DAP202K-T-146
D2303	8-719-914-44	DIODE DAP202K-T-146
D2310	8-719-083-57	DIODE UDZSTE-173.6B
D2500	8-719-404-50	DIODE MA111-TX
D2501	8-719-404-50	DIODE MA111-TX
D2502	8-719-404-50	DIODE MA111-TX

FERRITE BEAD

FB2001	1-414-229-11	FERRITE	0µH
FB2002	1-414-229-11	FERRITE	0µH
FB2200	1-414-229-11	FERRITE	0µH
FB2500	1-216-864-11	SHORT CHIP	0
FB2501	1-216-864-11	SHORT CHIP	0
FB2503	1-216-864-11	SHORT CHIP	0
FB2504	1-216-864-11	SHORT CHIP	0
FB2505	1-414-229-11	FERRITE	0µH
FB2507	1-414-229-11	FERRITE	0µH
FB2508	1-414-229-11	FERRITE	0µH
FB2509	1-216-864-11	SHORT CHIP	0
FB2510	1-414-229-11	FERRITE	0µH
FB2511	1-216-864-11	SHORT CHIP	0
FB2512	1-414-229-11	FERRITE	0µH
FB2513	1-216-864-11	SHORT CHIP	0
FB2514	1-216-864-11	SHORT CHIP	0
FB2515	1-414-229-11	FERRITE	0µH

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REF. NO.	PART NO.	DESCRIPTION	VALUES
FB2516	1-414-229-11	FERRITE	0µH
FB2517	1-414-229-11	FERRITE	0µH
FB2518	1-414-229-11	FERRITE	0µH
FB2519	1-414-229-11	FERRITE	0µH
FB2520	1-216-864-11	SHORT CHIP	0
FB2521	1-216-864-11	SHORT CHIP	0
FB2522	1-414-229-11	FERRITE	0µH
	FILTER		
FL2001	1-239-848-21	FILTER, LOW PASS	
FL2002	1-239-848-21	FILTER, LOW PASS	
FL2003	1-239-848-21	FILTER, LOW PASS	
FL2201	1-239-848-21	FILTER, LOW PASS	
FL2202	1-239-848-21	FILTER, LOW PASS	
FL2203	1-239-848-21	FILTER, LOW PASS	
FL2204	1-239-848-21	FILTER, LOW PASS	
	IC		
IC2001	8-752-394-69	IC CXD2073Q-T4	
IC2004	8-752-102-21	IC CXA2103AQ	
IC2005	8-752-102-21	IC CXA2103AQ	
IC2006	8-752-103-44	IC CXA2171Q	
IC2008	8-759-448-68	IC NJM2283V-TE1	
IC2009	6-700-205-01	IC TC74LVX157FT(EL)	
IC2010	6-700-205-01	IC TC74LVX157FT(EL)	
IC2200	6-700-960-01	IC UPD64083GF-3BA	
IC2201	6-700-399-01	IC UPC2925T-E1	
IC2300	6-802-167-01	IC M306V3MG-052FP	
IC2301	6-801-375-01	IC PST9129NL	
IC2302	8-759-682-41	IC M24C32-WMN6T(A)	
IC2303	8-752-930-68	IC CXP964032-001Q	
IC2304	8-752-930-68	IC CXP964032-001Q	
IC2305	8-759-641-26	IC NJM2391DL1-33(TE1)	
IC2500	8-759-394-57	IC PST593C-MMP-4P	
IC2501	6-801-750-01	IC TC94A04F-014	
IC2502	8-759-331-71	IC NJM4558E(TE2)	
IC2504	8-759-642-22	IC UPC29M05T-E2	
	CHIP CONDUCTOR		
JR1	1-216-864-11	SHORT CHIP	0
JR2001	1-216-864-11	SHORT CHIP	0
JR2002	1-216-864-11	SHORT CHIP	0
JR2003	1-216-864-11	SHORT CHIP	0
JR2004	1-216-864-11	SHORT CHIP	0
JR2005	1-216-864-11	SHORT CHIP	0

REF. NO.	PART NO.	DESCRIPTION	VALUES		
	COIL				
L2001	1-469-555-21	INDUCTOR	10µH		
L2003	1-469-555-21	INDUCTOR	10µH		
L2004	1-469-555-21	INDUCTOR	10µH		
L2005	1-469-555-21	INDUCTOR	10µH		
L2006	1-469-555-21	INDUCTOR	10µH		
L2007	1-469-555-21	INDUCTOR	10µH		
L2008	1-469-555-21	INDUCTOR	10µH		
L2009	1-469-555-21	INDUCTOR	10µH		
L2010	1-469-555-21	INDUCTOR	10µH		
L2011	1-469-555-21	INDUCTOR	10µH		
L2012	1-469-555-21	INDUCTOR	10µH		
L2013	1-469-555-21	INDUCTOR	10µH		
L2200	1-469-555-21	INDUCTOR	10µH		
L2201	1-469-555-21	INDUCTOR	10µH		
L2202	1-469-555-21	INDUCTOR	10µH		
L2203	1-216-001-00	RES-CHIP	10	5%	1/10W
L2204	1-469-555-21	INDUCTOR	10µH		
L2205	1-216-001-00	RES-CHIP	10	5%	1/10W
L2206	1-469-555-21	INDUCTOR	10µH		
L2207	1-469-553-21	INDUCTOR	4.7µH		
L2301	1-469-555-21	INDUCTOR	10µH		
L2302	1-469-555-21	INDUCTOR	10µH		
L2303	1-469-555-21	INDUCTOR	10µH		
L2501	1-412-537-31	INDUCTOR	100µH		
L2502	1-216-295-91	SHORT CHIP	0		
	TRANSISTOR				
Q2001	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q2002	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q2003	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q2004	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q2005	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q2006	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q2007	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q2008	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q2009	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q2010	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q2011	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q2012	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q2013	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q2014	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q2015	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			

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REF. NO.	PART NO.	DESCRIPTION	VALUES
Q2016	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2018	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2019	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2200	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2201	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2202	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2203	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2204	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2205	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2206	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2207	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2208	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2209	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2210	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2211	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2212	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2213	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2214	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2215	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2216	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2301	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2302	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2303	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2304	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2305	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2306	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2307	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2308	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2309	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2310	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2311	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2312	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2313	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2314	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2315	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2316	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2317	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2318	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2320	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2321	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2322	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2323	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2500	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2501	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2502	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
Q2503	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2504	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2505	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2506	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2507	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2508	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2509	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2510	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2511	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2512	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q2513	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	

RESISTOR

R2001	1-216-809-11	RES-CHIP	100	5%	1/10W
R2002	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2003	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R2004	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2005	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2006	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2007	1-218-708-11	METAL CHIP	4.7K	0.50%	1/16W
R2008	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R2009	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2010	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2011	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R2012	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2013	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2014	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2015	1-218-734-11	METAL CHIP	56K	0.50%	1/16W
R2016	1-216-839-11	RES-CHIP	33K	5%	1/10W
R2017	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2018	1-216-812-11	RES-CHIP	180	5%	1/10W
R2020	1-216-811-11	RES-CHIP	150	5%	1/10W
R2022	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R2023	1-216-839-11	RES-CHIP	33K	5%	1/10W
R2024	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2025	1-218-700-11	METAL CHIP	2.2K	0.50%	1/16W
R2026	1-218-704-11	METAL CHIP	3.3K	0.50%	1/16W
R2027	1-216-864-11	SHORT CHIP	0		
R2030	1-216-817-11	RES-CHIP	470	5%	1/10W
R2032	1-216-817-11	RES-CHIP	470	5%	1/10W
R2035	1-216-817-11	RES-CHIP	470	5%	1/10W
R2036	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2040	1-216-817-11	RES-CHIP	470	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2041	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2045	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R2046	1-218-686-11	METAL CHIP	560	0.50%	1/16W
R2048	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R2049	1-218-710-11	METAL CHIP	5.6K	0.50%	1/16W
R2050	1-216-817-11	RES-CHIP	470	5%	1/10W
R2051	1-216-817-11	RES-CHIP	470	5%	1/10W
R2052	1-216-835-11	RES-CHIP	15K	5%	1/10W
R2053	1-216-864-11	SHORT CHIP	0		
R2054	1-216-835-11	RES-CHIP	15K	5%	1/10W
R2055	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2056	1-216-809-11	RES-CHIP	100	5%	1/10W
R2057	1-216-809-11	RES-CHIP	100	5%	1/10W
R2058	1-216-809-11	RES-CHIP	100	5%	1/10W
R2059	1-216-809-11	RES-CHIP	100	5%	1/10W
R2061	1-216-828-11	RES-CHIP	3.9K	5%	1/10W
R2064	1-216-828-11	RES-CHIP	3.9K	5%	1/10W
R2067	1-216-809-11	RES-CHIP	100	5%	1/10W
R2069	1-216-864-11	SHORT CHIP	0		
R2071	1-216-864-11	SHORT CHIP	0		
R2072	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2073	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2074	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2075	1-216-864-11	SHORT CHIP	0		
R2076	1-216-864-11	SHORT CHIP	0		
R2077	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2081	1-216-809-11	RES-CHIP	100	5%	1/10W
R2082	1-216-809-11	RES-CHIP	100	5%	1/10W
R2083	1-216-851-11	RES-CHIP	330K	5%	1/10W
R2086	1-216-818-11	RES-CHIP	560	5%	1/10W
R2087	1-216-818-11	RES-CHIP	560	5%	1/10W
R2091	1-216-809-11	RES-CHIP	100	5%	1/10W
R2092	1-216-818-11	RES-CHIP	560	5%	1/10W
R2093	1-216-818-11	RES-CHIP	560	5%	1/10W
R2094	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R2095	1-216-864-11	SHORT CHIP	0		
R2097	1-216-809-11	RES-CHIP	100	5%	1/10W
R2099	1-216-809-11	RES-CHIP	100	5%	1/10W
R2101	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2103	1-216-809-11	RES-CHIP	100	5%	1/10W
R2105	1-216-809-11	RES-CHIP	100	5%	1/10W
R2107	1-216-809-11	RES-CHIP	100	5%	1/10W
R2110	1-216-818-11	RES-CHIP	560	5%	1/10W
R2111	1-216-818-11	RES-CHIP	560	5%	1/10W
R2112	1-216-809-11	RES-CHIP	100	5%	1/10W
R2113	1-216-809-11	RES-CHIP	100	5%	1/10W
R2114	1-216-805-11	RES-CHIP	47	5%	1/10W
R2115	1-216-805-11	RES-CHIP	47	5%	1/10W
R2116	1-216-805-11	RES-CHIP	47	5%	1/10W
R2118	1-216-809-11	RES-CHIP	100	5%	1/10W
R2119	1-216-809-11	RES-CHIP	100	5%	1/10W
R2120	1-216-809-11	RES-CHIP	100	5%	1/10W
R2123	1-216-809-11	RES-CHIP	100	5%	1/10W
R2124	1-216-809-11	RES-CHIP	100	5%	1/10W
R2125	1-216-809-11	RES-CHIP	100	5%	1/10W
R2126	1-216-809-11	RES-CHIP	100	5%	1/10W
R2131	1-216-809-11	RES-CHIP	100	5%	1/10W
R2133	1-216-864-11	SHORT CHIP	0		
R2201	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2202	1-216-809-11	RES-CHIP	100	5%	1/10W
R2203	1-216-809-11	RES-CHIP	100	5%	1/10W
R2204	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2205	1-216-864-11	SHORT CHIP	0		
R2206	1-216-864-11	SHORT CHIP	0		
R2207	1-216-809-11	RES-CHIP	100	5%	1/10W
R2208	1-216-809-11	RES-CHIP	100	5%	1/10W
R2209	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2210	1-216-818-11	RES-CHIP	560	5%	1/10W
R2211	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2212	1-216-818-11	RES-CHIP	560	5%	1/10W
R2213	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2214	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2215	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R2216	1-216-817-11	RES-CHIP	470	5%	1/10W
R2217	1-216-817-11	RES-CHIP	470	5%	1/10W
R2218	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R2219	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R2220	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2221	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2222	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2223	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2224	1-216-809-11	RES-CHIP	100	5%	1/10W
R2225	1-216-818-11	RES-CHIP	560	5%	1/10W
R2226	1-216-817-11	RES-CHIP	470	5%	1/10W
R2227	1-216-816-11	RES-CHIP	390	5%	1/10W
R2228	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2229	1-216-849-11	RES-CHIP	220K	5%	1/10W
R2230	1-216-841-11	RES-CHIP	47K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2231	1-216-819-11	RES-CHIP	680	5%	1/10W
R2232	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2233	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2234	1-216-820-11	RES-CHIP	820	5%	1/10W
R2235	1-216-822-11	RES-CHIP	1.2K	5%	1/10W
R2236	1-216-813-11	RES-CHIP	220	5%	1/10W
R2237	1-216-820-11	RES-CHIP	820	5%	1/10W
R2238	1-216-819-11	RES-CHIP	680	5%	1/10W
R2239	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2240	1-216-834-11	RES-CHIP	12K	5%	1/10W
R2241	1-216-839-11	RES-CHIP	33K	5%	1/10W
R2242	1-218-680-11	METAL CHIP	330	0.50%	1/16W
R2243	1-216-834-11	RES-CHIP	12K	5%	1/10W
R2244	1-216-839-11	RES-CHIP	33K	5%	1/10W
R2245	1-218-684-11	METAL CHIP	470	0.50%	1/16W
R2246	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2247	1-216-805-11	RES-CHIP	47	5%	1/10W
R2248	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2249	1-216-805-11	RES-CHIP	47	5%	1/10W
R2250	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R2251	1-216-818-11	RES-CHIP	560	5%	1/10W
R2252	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2253	1-216-809-11	RES-CHIP	100	5%	1/10W
R2254	1-216-817-11	RES-CHIP	470	5%	1/10W
R2255	1-216-817-11	RES-CHIP	470	5%	1/10W
R2256	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2257	1-216-864-11	SHORT CHIP	0		
R2258	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2259	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2260	1-216-840-11	RES-CHIP	39K	5%	1/10W
R2261	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2298	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2299	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2300	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2301	1-216-809-11	RES-CHIP	100	5%	1/10W
R2302	1-216-809-11	RES-CHIP	100	5%	1/10W
R2303	1-216-809-11	RES-CHIP	100	5%	1/10W
R2304	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2305	1-216-809-11	RES-CHIP	100	5%	1/10W
R2306	1-216-809-11	RES-CHIP	100	5%	1/10W
R2307	1-216-809-11	RES-CHIP	100	5%	1/10W
R2308	1-216-809-11	RES-CHIP	100	5%	1/10W
R2309	1-216-809-11	RES-CHIP	100	5%	1/10W
R2310	1-216-833-11	RES-CHIP	10K	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2311	1-216-809-11	RES-CHIP	100	5%	1/10W
R2312	1-216-809-11	RES-CHIP	100	5%	1/10W
R2313	1-216-809-11	RES-CHIP	100	5%	1/10W
R2314	1-216-809-11	RES-CHIP	100	5%	1/10W
R2315	1-216-809-11	RES-CHIP	100	5%	1/10W
R2316	1-216-809-11	RES-CHIP	100	5%	1/10W
R2317	1-216-809-11	RES-CHIP	100	5%	1/10W
R2318	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2319	1-216-809-11	RES-CHIP	100	5%	1/10W
R2320	1-216-809-11	RES-CHIP	100	5%	1/10W
R2321	1-216-809-11	RES-CHIP	100	5%	1/10W
R2322	1-216-809-11	RES-CHIP	100	5%	1/10W
R2323	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2324	1-216-809-11	RES-CHIP	100	5%	1/10W
R2325	1-216-864-11	SHORT CHIP	0		
R2326	1-216-809-11	RES-CHIP	100	5%	1/10W
R2327	1-216-809-11	RES-CHIP	100	5%	1/10W
R2328	1-216-809-11	RES-CHIP	100	5%	1/10W
R2329	1-216-815-11	RES-CHIP	330	5%	1/10W
R2330	1-216-817-11	RES-CHIP	470	5%	1/10W
R2333	1-216-809-11	RES-CHIP	100	5%	1/10W
R2335	1-216-820-11	RES-CHIP	820	5%	1/10W
R2336	1-216-809-11	RES-CHIP	100	5%	1/10W
R2337	1-216-809-11	RES-CHIP	100	5%	1/10W
R2338	1-216-864-11	SHORT CHIP	0		
R2339	1-216-809-11	RES-CHIP	100	5%	1/10W
R2340	1-216-809-11	RES-CHIP	100	5%	1/10W
R2341	1-216-809-11	RES-CHIP	100	5%	1/10W
R2342	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2343	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2344	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2345	1-216-809-11	RES-CHIP	100	5%	1/10W
R2346	1-218-734-11	METAL CHIP	56K	0.50%	1/16W
R2347	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2348	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2349	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2350	1-216-809-11	RES-CHIP	100	5%	1/10W
R2351	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2352	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2353	1-216-809-11	RES-CHIP	100	5%	1/10W
R2354	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2355	1-216-809-11	RES-CHIP	100	5%	1/10W
R2356	1-216-805-11	RES-CHIP	47	5%	1/10W
R2357	1-216-833-11	RES-CHIP	10K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2358	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2359	1-216-805-11	RES-CHIP	47	5%	1/10W
R2360	1-216-864-11	SHORT CHIP	0		
R2361	1-216-864-11	SHORT CHIP	0		
R2362	1-216-805-11	RES-CHIP	47	5%	1/10W
R2363	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2364	1-216-809-11	RES-CHIP	100	5%	1/10W
R2365	1-216-864-11	SHORT CHIP	0		
R2366	1-216-864-11	SHORT CHIP	0		
R2367	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2368	1-216-809-11	RES-CHIP	100	5%	1/10W
R2369	1-216-805-11	RES-CHIP	47	5%	1/10W
R2370	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2371	1-216-809-11	RES-CHIP	100	5%	1/10W
R2372	1-216-809-11	RES-CHIP	100	5%	1/10W
R2373	1-216-864-11	SHORT CHIP	0		
R2374	1-216-864-11	SHORT CHIP	0		
R2375	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2376	1-216-805-11	RES-CHIP	47	5%	1/10W
R2377	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2378	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2379	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2380	1-216-809-11	RES-CHIP	100	5%	1/10W
R2381	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2382	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2383	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2384	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2385	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2386	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2387	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2388	1-216-815-11	RES-CHIP	330	5%	1/10W
R2389	1-216-815-11	RES-CHIP	330	5%	1/10W
R2390	1-216-809-11	RES-CHIP	100	5%	1/10W
R2391	1-216-809-11	RES-CHIP	100	5%	1/10W
R2392	1-216-809-11	RES-CHIP	100	5%	1/10W
R2393	1-216-809-11	RES-CHIP	100	5%	1/10W
R2394	1-216-864-11	SHORT CHIP	0		
R2395	1-216-864-11	SHORT CHIP	0		
R2396	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2397	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2398	1-216-857-11	RES-CHIP	1M	5%	1/10W
R2399	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R2400	1-216-811-11	RES-CHIP	150	5%	1/10W
R2401	1-216-811-11	RES-CHIP	150	5%	1/10W
R2402	1-216-811-11	RES-CHIP	150	5%	1/10W
R2403	1-216-857-11	RES-CHIP	1M	5%	1/10W
R2404	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W
R2405	1-216-811-11	RES-CHIP	150	5%	1/10W
R2406	1-216-811-11	RES-CHIP	150	5%	1/10W
R2407	1-216-811-11	RES-CHIP	150	5%	1/10W
R2408	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2409	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2410	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2411	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2412	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2413	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2414	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R2415	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R2416	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2417	1-216-827-11	RES-CHIP	3.3K	5%	1/10W
R2418	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R2419	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2420	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2421	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2422	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2423	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2424	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2425	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2426	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2427	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2428	1-216-824-11	RES-CHIP	1.8K	5%	1/10W
R2429	1-216-824-11	RES-CHIP	1.8K	5%	1/10W
R2430	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2431	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2432	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2433	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2434	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2435	1-216-820-11	RES-CHIP	820	5%	1/10W
R2436	1-216-820-11	RES-CHIP	820	5%	1/10W
R2437	1-216-809-11	RES-CHIP	100	5%	1/10W
R2438	1-216-820-11	RES-CHIP	820	5%	1/10W
R2450	1-216-864-11	SHORT CHIP	0		
R2452	1-216-839-11	RES-CHIP	33K	5%	1/10W
R2453	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2454	1-216-809-11	RES-CHIP	100	5%	1/10W
R2455	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2459	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2460	1-216-809-11	RES-CHIP	100	5%	1/10W

M

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2461	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2463	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2464	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2466	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2467	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2469	1-216-809-11	RES-CHIP	100	5%	1/10W
R2470	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2471	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2472	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2473	1-216-839-11	RES-CHIP	33K	5%	1/10W
R2474	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2480	1-216-845-11	RES-CHIP	100K	5%	1/10W
R2481	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2483	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2484	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2500	1-216-809-11	RES-CHIP	100	5%	1/10W
R2501	1-216-839-11	RES-CHIP	33K	5%	1/10W
R2502	1-216-864-11	SHORT CHIP	0		
R2503	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2506	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2508	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2509	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2510	1-216-839-11	RES-CHIP	33K	5%	1/10W
R2511	1-216-839-11	RES-CHIP	33K	5%	1/10W
R2512	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2513	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2514	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2515	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2516	1-216-839-11	RES-CHIP	33K	5%	1/10W
R2517	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2518	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2519	1-216-857-11	RES-CHIP	1M	5%	1/10W
R2520	1-216-864-11	SHORT CHIP	0		
R2521	1-216-864-11	SHORT CHIP	0		
R2522	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2523	1-216-813-11	RES-CHIP	220	5%	1/10W
R2524	1-216-809-11	RES-CHIP	100	5%	1/10W
R2525	1-216-813-11	RES-CHIP	220	5%	1/10W
R2526	1-216-864-11	SHORT CHIP	0		
R2528	1-216-809-11	RES-CHIP	100	5%	1/10W
R2529	1-216-809-11	RES-CHIP	100	5%	1/10W
R2530	1-216-809-11	RES-CHIP	100	5%	1/10W
R2531	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2532	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2533	1-216-864-11	SHORT CHIP	0		
R2534	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2535	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2536	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2538	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2539	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2540	1-216-864-11	SHORT CHIP	0		
R2541	1-216-864-11	SHORT CHIP	0		
R2542	1-216-829-11	RES-CHIP	4.7K	5%	1/10W
R2543	1-216-864-11	SHORT CHIP	0		
R2546	1-216-813-11	RES-CHIP	220	5%	1/10W
R2547	1-216-813-11	RES-CHIP	220	5%	1/10W
R2548	1-216-841-11	RES-CHIP	47K	5%	1/10W
R2549	1-216-813-11	RES-CHIP	220	5%	1/10W
R2550	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2551	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2552	1-216-809-11	RES-CHIP	100	5%	1/10W
R2553	1-216-853-11	RES-CHIP	470K	5%	1/10W
R2554	1-216-809-11	RES-CHIP	100	5%	1/10W
R2555	1-216-853-11	RES-CHIP	470K	5%	1/10W
R2556	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2557	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2558	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2559	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2560	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2561	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2562	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2563	1-216-833-11	RES-CHIP	10K	5%	1/10W
R2564	1-216-817-11	RES-CHIP	470	5%	1/10W
R2565	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2566	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2567	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2568	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2569	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2570	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2571	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2572	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2573	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2574	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2575	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2576	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2577	1-216-837-11	RES-CHIP	22K	5%	1/10W
R2578	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2579	1-216-837-11	RES-CHIP	22K	5%	1/10W

M HB HM

REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2580	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2581	1-216-825-11	RES-CHIP	2.2K	5%	1/10W
R2582	1-216-809-11	RES-CHIP	100	5%	1/10W
R2584	1-216-813-11	RES-CHIP	220	5%	1/10W
R2585	1-216-864-11	SHORT CHIP	0		
R2593	1-216-864-11	SHORT CHIP	0		
R2603	1-216-845-11	RES-CHIP	100K	5%	1/10W
R2604	1-216-845-11	RES-CHIP	100K	5%	1/10W
R2605	1-216-864-11	SHORT CHIP	0		
R2607	1-216-821-11	RES-CHIP	1K	5%	1/10W
R2608	1-216-833-11	RES-CHIP	10K	5%	1/10W
		CRYSTAL			
X2001	1-567-505-11	OSCILLATOR, CRYSTAL			
X2002	1-567-505-11	OSCILLATOR, CRYSTAL			
X2003	1-781-282-11	VIBRATOR, CERAMIC			
X2200	1-767-606-11	VIBRATOR, CRYSTAL			
X2300	1-795-572-11	VIBRATOR, CRYSTAL			
X2302	1-795-565-21	VIBRATOR, CERAMIC			
X2303	1-795-565-21	VIBRATOR, CERAMIC			
X2500	1-767-639-21	VIBRATOR, CRYSTAL			

HB

*	**A-1400-747-A**	**HB BOARD, MOUNTED**	
		CAPACITOR	
C1100	1-126-960-11	ELECT	1µF 20% 50V
C1101	1-126-960-11	ELECT	1µF 20% 50V
		CONNECTOR	
* CN1101	1-564-526-11	PLUG,CONNECTOR	11P
		DIODE	
D1100	8-719-110-17	DIODE MTZJ-T-77-10B	
D1101	8-719-110-17	DIODE MTZJ-T-77-10B	
D1103	8-719-110-17	DIODE MTZJ-T-77-10B	
		JACK	
J1101	1-770-361-11	TERMINAL BLOCK, S	
		RESISTOR	
R1100	1-247-895-91	CARBON	470K 5% 1/4W
R1101	1-247-895-91	CARBON	470K 5% 1/4W
R1102	1-247-804-11	CARBON	75 5% 1/4W
R1103	1-247-804-11	CARBON	75 5% 1/4W
R1106	1-249-417-11	CARBON	1K 5% 1/4W
R1107	1-247-804-11	CARBON	75 5% 1/4W

HM

The HM board is <u>not</u> field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

*	**A-1300-323-A**	**HM BOARD, MOUNTED**	
		CAPACITOR	
C7205	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7206	1-163-021-91	CERAMIC CHIP	0.01µF 10% 50V
C7208	1-124-779-00	ELECT CHIP	10µF 20% 16V
C7209	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7210	1-163-021-91	CERAMIC CHIP	0.01µF 10% 50V
C7212	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C7213	1-124-778-00	ELECT CHIP	22µF 20% 6.3V
C7214	1-107-826-11	CERAMIC CHIP	0.1µF 10% 16V
C7215	1-107-826-11	CERAMIC CHIP	0.1µF 10% 16V
C7216	1-107-826-11	CERAMIC CHIP	0.1µF 10% 16V
C7217	1-124-778-00	ELECT CHIP	22µF 20% 6.3V
C7219	1-162-970-11	CERAMIC CHIP	0.01µF 10% 25V
C7220	1-162-970-11	CERAMIC CHIP	0.01µF 10% 25V
		CONNECTOR	
* CN7201	1-816-402-11	CONNECTOR, MEMORY STICK	
CN7205	1-695-915-11	TAB (CONTACT)	
		DIODE	
D7201	8-719-800-76	DIODE MA153-TX	
D7202	8-719-800-76	DIODE MA153-TX	
D7203	8-719-800-76	DIODE MA153-TX	
D7204	8-719-800-76	DIODE MA153-TX	
D7205	8-719-800-76	DIODE MA153-TX	
D7206	8-719-800-76	DIODE MA153-TX	
D7207	8-719-800-76	DIODE MA153-TX	
D7208	8-719-800-76	DIODE MA153-TX	
D7209	6-500-182-01	DIODE L1503CB/ID	
D7210	8-719-083-58	DIODE UDZSTE-173.9B	

HM HA

REF. NO.	PART NO.	DESCRIPTION	VALUES		
D7211	8-719-083-58	DIODE UDZSTE-173.9B			
D7212	8-719-800-76	DIODE MA153-TX			
D7213	8-719-800-76	DIODE MA153-TX			
D7214	8-719-800-76	DIODE MA153-TX			
D7215	8-719-800-76	DIODE MA153-TX			
D7216	8-719-800-76	DIODE MA153-TX			
D7217	8-719-800-76	DIODE MA153-TX			
	FERRITE BEAD				
FB7201	1-414-921-11	FERRITE	0µH		
FB7202	1-414-921-11	FERRITE	0µH		
FB7203	1-414-921-11	FERRITE	0µH		
FB7204	1-414-921-11	FERRITE	0µH		
	IC				
IC7201	8-759-639-86	IC SN65LVDS32DR			
IC7202	6-701-763-11	IC DS90LV017ATMX			
IC7203	8-759-698-08	IC SN74CBTLV1G125DCKR			
	COIL				
L7201	1-419-370-21	INDUCTOR	0µH		
L7202	1-419-370-21	INDUCTOR	0µH		
L7203	1-419-370-21	INDUCTOR	0µH		
L7204	1-419-370-21	INDUCTOR	0µH		
L7205	1-419-370-21	INDUCTOR	0µH		
	TRANSISTOR				
Q7201	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q7202	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q7203	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
	RESISTOR				
R7201	1-216-801-11	RES-CHIP	22	5%	1/10W
R7202	1-216-801-11	RES-CHIP	22	5%	1/10W
R7204	1-216-801-11	RES-CHIP	22	5%	1/10W
R7205	1-218-692-11	METAL CHIP	1K	0.50%	1/16W
R7206	1-216-809-11	RES-CHIP	100	5%	1/10W
R7207	1-216-809-11	RES-CHIP	100	5%	1/10W
R7208	1-216-809-11	RES-CHIP	100	5%	1/10W
R7209	1-216-809-11	RES-CHIP	100	5%	1/10W
R7210	1-216-803-11	RES-CHIP	33	5%	1/10W
R7221	1-216-821-11	RES-CHIP	1K	5%	1/10W
R7222	1-216-809-11	RES-CHIP	100	5%	1/10W
R7224	1-216-833-11	RES-CHIP	10K	5%	1/10W
R7225	1-216-845-11	RES-CHIP	100K	5%	1/10W
R7226	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R7228	1-216-864-11	SHORT CHIP	0		
R7231	1-216-864-11	SHORT CHIP	0		
R7232	1-216-841-11	RES-CHIP	47K	5%	1/10W
R7233	1-216-841-11	RES-CHIP	47K	5%	1/10W

HA

*	**A-1400-748-A**	**HA BOARD, MOUNTED**			
	CAPACITOR				
C1201	1-126-157-11	ELECT	10µF	20%	16V
	CONNECTOR				
* CN1201	1-564-525-11	PLUG,CONNECTOR	10P		
	DIODE				
D1201	8-719-053-43	DIODE SLR-325VCT31			
D1202	8-719-053-43	DIODE SLR-325VCT31			
	IC				
IC1201	8-742-129-00	HYB IC SBX1971-51P			
	RESISTOR				
R1201	1-247-807-31	CARBON	100	5%	1/4W
R1202	1-249-413-11	CARBON	470	5%	1/4W
R1203	1-249-415-11	CARBON	680	5%	1/4W
R1204	1-249-417-11	CARBON	1K	5%	1/4W
R1205	1-249-421-11	CARBON	2.2K	5%	1/4W
R1206	1-249-409-11	CARBON	220	5%	1/4W
R1207	1-249-409-11	CARBON	220	5%	1/4W
R1208	1-249-393-11	CARBON	10	5%	1/4W
R1209	1-249-433-11	CARBON	22K	5%	1/4W
	SWITCH				
S1201	1-572-198-11	SWITCH KEYBOARD			
S1202	1-572-198-11	SWITCH KEYBOARD			
S1203	1-572-198-11	SWITCH KEYBOARD			
S1204	1-572-198-11	SWITCH KEYBOARD			
S1205	1-572-198-11	SWITCH KEYBOARD			
S1206	1-572-198-11	SWITCH KEYBOARD			
S1207	1-572-198-11	SWITCH KEYBOARD			

SR

REF. NO.	PART NO.	DESCRIPTION	VALUES

SR

The SR board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

*	**A-1400-759-A**	**SR BOARD, MOUNTED**	
		CONNECTOR	
*	CN9901	1-564-506-11	PLUG,CONNECTOR 3P
		DIODE	
	D9902	8-719-069-55	DIODE UDZSTE-175.6B
		BATTERY	
	SB9901	1-756-295-11	BATTERY, SOLAR

REF. NO.	PART NO.	DESCRIPTION
		ACCESSORIES AND PACKING
	1-796-426-11	CD-ROM
*	4-042-463-01	SHEET, PROTECTION
*	4-076-420-01	BAG, PROTECTION
	4-088-026-11	MANUAL, INSTRUCTION
	4-088-026-21	MANUAL, INSTRUCTION (KP-57WV700/65WV700 ONLY)
	4-088-026-31	MANUAL, INSTRUCTION (KP-65WV700 ONLY)
*	4-088-440-01	CUSHION, UPPER (KP-57WV600/57WV700 ONLY)
*	4-088-441-01	CUSHION, LOWER (KP-57WV700 ONLY)
*	4-088-444-01	CUSHION, LOWER (KP-57WV600 ONLY)
*	4-088-445-01	CUSHION, UPPER (KP-65WV600/65WV700 ONLY)
*	4-088-446-01	CUSHION, LOWER (KP-65WV600/65WV700 ONLY)
*	4-088-442-01	INDIVIDUAL, CARTON (KP-57WV600/57WV700 ONLY)
*	4-088-447-01	INDIVIDUAL, CARTON (KP-65WV600/65WV700 ONLY)
*	4-088-443-01	TRAY (KP-57WV600/57WV700 ONLY)
*	4-088-448-01	TRAY (KP-65WV600/65WV700 ONLY)
	1-468-681-11	REMOTE COMMANDER RM-Y188
	4-081-888-01	BATTERY COVER (for RM-Y188)

Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

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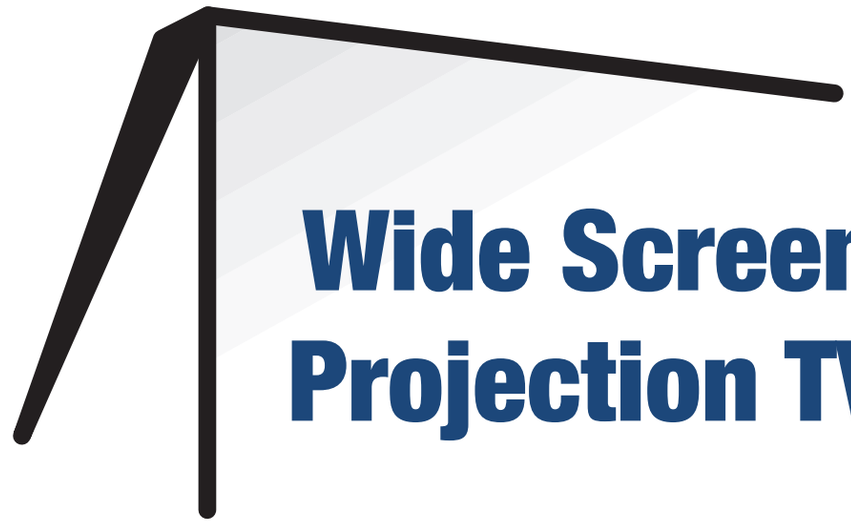
9-965-926-09

SERVICE MANUAL DA-4X CHASSIS

In an effort to reduce the size of this pdf file the tiled schematics are not attached to this Service Manual. To receive a complete set of the tiled schematics for this manual please submit a request to Nita Wardlaw at nita.wardlaw@am.sony.com.

SONY

4-088-026-**11**



Wide Screen Projection TV

Operating Instructions

© 2002 Sony Corporation

KP-57WV600 KP-65WV600
KP-57WV700 KP-65WV700

http://www.world.sony.com/

Sony Corporation

Printed in U.S.A.

WARNING

To reduce the risk of fire or shock hazard, do not expose the projection TV to rain or moisture.





This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

To prevent electric shock, do not use this polarized AC plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

CAUTION

When using TV games, computers, and similar products with your projection TV, or viewing a TV station whose logo always stays on the screen, keep the brightness and contrast functions at low settings. If a fixed (non-moving) pattern such as a station logo is left on the screen for long periods of time, especially at a high brightness or contrast setting, the image can be permanently imprinted onto the screen. These types of imprints are not covered by your warranty.

Note on Caption Vision

This television receiver provides display of television closed captioning in accordance with §15.119 of the FCC rules.

Note on Convergence Adjustment

Before you use your projection TV, make sure to adjust convergence. For details, see "Adjusting the Convergence Automatically (Flash Focus)" on page 44.

Note to CATV System Installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the National Electrical Code (NEC) that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Use of this television receiver for other than private viewing of programs broadcast on UHF or VHF or transmitted by cable companies for the use of the general public may require authorization from the broadcaster/cable company and/or program owner.

NOTIFICATION

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ❑ Reorient or relocate the receiving antennas.
- ❑ Increase the separation between the equipment and receiver.
- ❑ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ❑ Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Safety

- ❑ Operate the projection TV only on 120 V AC.
- ❑ The plug is designed, for safety purposes, to fit into the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- ❑ If any liquid or solid object should fall inside the cabinet, unplug the projection TV immediately and have it checked by qualified service personnel before operating it further.
- ❑ If you will not be using the projection TV for several days, disconnect the power by pulling the plug itself. Never pull on the cord.
- ❑ For details concerning safety precautions, see "Important Safeguards" on page 3.

Installing

- To prevent internal heat buildup, do not block the ventilation openings.
- Do not install the projection TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.
- Avoid operating the projection TV at temperatures below 5°C (41°F).
- If the projection TV is transported directly from a cold to a warm location, or if the room temperature changes suddenly, the picture may be blurred or show poor color due to moisture condensation. In this case, please wait a few hours to let the moisture evaporate before turning on the projection TV.
- To obtain the best picture, do not expose the screen to direct illumination or direct sunlight. It is recommended to use spot lighting directed down from the ceiling or to cover the windows that face the screen with opaque drapery. It is desirable to install the projection TV in a room where the floor and walls are not of a reflective material.



As an ENERGY STAR® Partner, Sony has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

ENERGY STAR® is a U.S. registered mark.

CAUTION

How to reduce the risk of "Image Retention" on your Projection TV

Bright, stationary images such as TV station logos displayed on your TV can cause permanent damage to your TV, resulting in retention of the image in the picture. Please take the following steps to reduce the risk of causing image retention:

View a variety of program sources or programming material.

Image retention can occur when bright stationary images such as TV station logos are viewed. Changing the program material viewed reduces the possibility that a single image will become imprinted on the picture tubes in your TV.

When viewing programs with stationary images, adjust the picture setting to reduce the "Picture" and "Brightness" levels. Image retention is accelerated by higher "Brightness" and higher "Picture" settings.

Please see page 72 for instructions on adjusting picture settings.

This will help you reduce the risk of causing image retention.

IMAGE RETENTION IS NOT COVERED BY YOUR WARRANTY

Trademark Information

TruSurround and the (●)* symbol are trademarks of SRS Labs, Inc. TruSurround technology is incorporated under license from SRS Labs, Inc.

BBE and BBE Symbol are trademarks of BBE Sound, Inc. and are licensed by BBE Sound, Inc. under U.S. Patent No. 4,638,258 and 4,482,866.

Steady Sound, Digital Reality Creation, Caption Vision, CineMotion, Memory Stick, and Twin View are registered trademarks of Sony Corporation. ClearEdge VM, HD Detailer, and Uniform Brightness Screen are trademarks of Sony Corporation.

Owner's Record

The model and serial numbers are located at the rear of the projection TV, below the Sony logo, on the sticker, and also on the TV box (white label). Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____

Serial No. _____

IMPORTANT SAFEGUARDS

For your protection, please read these instructions completely, and keep this manual for future reference.

Carefully observe and comply with all warnings, cautions and instructions placed on the set or described in the operating instructions or service manual.

WARNING

To guard against injury, the following basic safety precautions should be observed in the installation, use and servicing of the set.

Use

Power Sources

This set should be operated only from the type of power source indicated on the serial/model plate. If you are not sure of the type of electrical power supplied to your home, consult your dealer or local power company. For those sets designed to operate from battery power, refer to the operating instructions.



Grounding or Polarization

This set is equipped with a polarized AC power cord plug (a plug having one blade wider than the other), or with a three-wire grounding type plug (a plug having a third pin for grounding).Follow the instructions below:

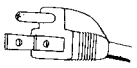
For the set with a polarized AC power cord plug

This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to have a suitable outlet installed. Do not defeat the safety purpose of the polarized plug by forcing it in.



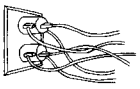
For the set with a three-wire grounding type AC plug

This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to have a suitable outlet installed. Do not defeat the safety purpose of the grounding plug.



Overloading

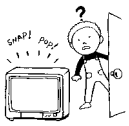
Do not overload wall outlets, extension cords or convenience receptacles beyond their capacity, since this can result in fire or electric shock.



Always turn the set off when it is not being used. When the set is left unattended and unused for long periods of time, unplug it from the wall outlet as a precaution against the possibility of an internal malfunction that could create a fire hazard.

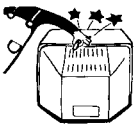


If a snapping or popping sound from a TV set is continuous or frequent while the TV is operating, unplug the TV and consult your dealer or service technician. It is normal for some TV sets to make occasional snapping or popping sounds, particularly when being turned on or off.



Object and Liquid Entry

Never push objects of any kind into the set through the cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the set.



Cleaning

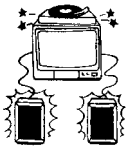
Clean the cabinet of the projection TV with a dry soft cloth. To remove dust from the screen, wipe it gently with a soft cloth. Stubborn stains may be removed with a cloth slightly dampened with a solution of mild soap and warm water. Never use strong solvents such as thinner or benzine for cleaning.



If the picture becomes dark after using the projection TV for a long period of time, it may be necessary to clean the inside of the projection TV. Consult qualified service personnel.

Attachments

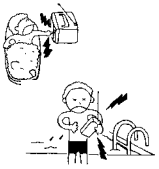
Do not use attachments not recommended by the manufacturer, as they may cause hazards.



Installation

Water and Moisture

Do not use power-line operated sets near water — for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.



Accessories

Do not place the set on an unstable cart, stand, table or shelf. The set may fall, causing serious injury to a child or an adult and serious damage to the set. Use only a cart or stand recommended by Sony for the specific model of TV. No part of the TV set should overhang any edge of the TV cart or stand; any overhanging edge is a safety hazard. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

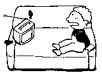


Ventilation

The slots and openings in the cabinet and in the back or bottom are provided for necessary ventilation. To ensure reliable operation of the set, and to protect it from overheating, these slots and openings must never be blocked or covered.



- ❑ Never cover the slots and openings with a cloth or other materials.



- ❑ Never block the slots and openings by placing the set on a bed, sofa, rug or other similar surface.



- ❑ Never place the set in a confined space, such as a bookcase or built-in cabinet, unless proper ventilation is provided.



- ❑ Do not place the set near or over a radiator or heat register, or where it is exposed to direct sunlight.

Power-Cord Protection

Do not allow anything to rest on or roll over the power cord, and do not place the set where the power cord is subject to wear or abuse.



Antennas

Outdoor Antenna Grounding

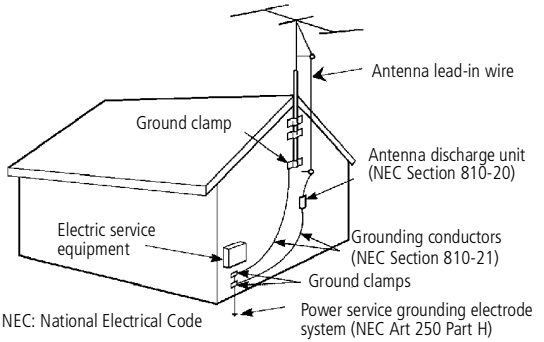
If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits.

WHEN INSTALLING AN OUTDOOR ANTENNA SYSTEM, EXTREME CARE SHOULD BE TAKEN TO KEEP FROM CONTACTING SUCH POWER LINES OR CIRCUITS AS CONTACT WITH THEM IS ALMOST INVARIABLY FATAL.

Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electrical Code (NEC) in USA and Section 54 of the Canadian Electrical Code in Canada provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Antenna Grounding According to the National Electrical Code, ANSI/NFPA 70



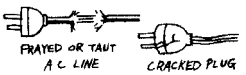
Lightning

For added protection for this television receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage to the receiver due to lightning and power-line surges.

Service

Damage Requiring Service

Unplug the set from the wall outlet and refer servicing to qualified service personnel under the following conditions:



- ❑ When the power cord or plug is damaged or frayed.
- ❑ If liquid has been spilled into the set.



- ❑ If the set has been exposed to rain or water.
- ❑ If the set has been subject to excessive shock by being dropped, or the cabinet has been damaged.



- ❑ If the set does not operate normally when following the operating instructions. Adjust only those controls that are specified in the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the set to normal operation.





- ❑ When the set exhibits a distinct change in performance, it indicates a need for service.

Servicing

Do not attempt to service the set yourself since opening the cabinet may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.



Replacement Parts

When replacement parts are required, be sure the service technician certifies in writing that he has used replacement parts specified by the manufacturer that have the same characteristics as the original parts.



Unauthorized substitutions may result in fire, electric shock or other hazards.

Safety Check

Upon completion of any service or repairs to the set, ask the service technician to perform routine safety checks (as specified by the manufacturer) to determine that the set is in safe operating condition, and to so certify. When the set reaches the end of its useful life, improper disposal could result in a picture tube implosion. Ask a qualified service technician to dispose of the set.

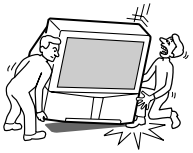


For Safety

Be careful when moving the projection TV

When you place the projection TV in position, be careful not to drop it on your foot or fingers.

Watch your footing while installing the projection TV.



Carry the projection TV in the specified manner

If you carry the projection TV in a manner other than the specified manner and without the specified number of persons, it may drop and a serious injury may be caused. Be sure to follow the instructions mentioned below.

- Carry the projection TV with the specified number of persons (see “Carrying Your Projection TV” on page 12).
- Do not carry the projection TV holding the speaker grill.
- Hold the projection TV tightly when carrying it.

The projection TV includes handles that you can use to carry the unit.

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Introducing the Projection TV

Welcome

Thank you for purchasing the Sony Projection TV. This manual is to be used with the following models:

- KP-57WV600
- KP-65WV600
- KP-57WV700
- KP-65WV700

Package Contents

Along with your new projection TV, the package contains a remote control and two AA batteries. No additional cables are included. These items are all you need to set up and operate the projection TV in its basic configuration.

Most components (VCRs, DVD players, etc.) come with the necessary cables to connect them. If you want to set up a complex system, you may need to buy extra cables, connectors, etc. Be sure to have these on hand before you start to connect your system.

Features

Some of the features that you will enjoy with your new TV include:

- **Wide Screen Mode:** Watch conventional 4:3 aspect ratio broadcasts in wide screen (16:9) mode.
- **DRC® (Digital Reality Creation) Multifunction V1:** Unlike conventional line doublers, the DRC Multifunction feature replaces the signal's NTSC waveform with the near-HD equivalent, while doubling the number of vertical and horizontal lines. This results in four times the density for quality sources, such as DVD, satellite, and digital camcorders. The Video Menu allows you to select interlaced, progressive, or CineMotion™ output. The DRC Palette option lets you customize the level of detail (Reality) and smoothness (Clarity) to create up to three custom palettes.
- **Scrolling Index:** Lets you preview and select programs from a scrolling index of video pictures.
- **Favorite Channels**: Allows you to preview and select from eight of your favorite channels.

- **Twin View™:** Using the Multi-Image Driver (MIDX), Twin View allows you to watch two programs side by side, with the ability to zoom in one picture. You can watch pictures from two different sources (1080i, 720p, 480p, and 480i) simultaneously. (Only the left Twin View window can display 1080i, 720p, and 480p sources.)
- **ClearEdge VM™ Velocity Modulation:** Sharpens picture definition by enhancing vertical lines.
- **Uniform Brightness Screen™** *(KP-57/65WV700 only)***:** Special optical technology expands the vertical viewing angle to nearly double that of other rear projection televisions.
- **Steady Sound®:** Equalizes volume levels so there is consistent output between programs and commercials.
- **Memory Stick® Picture Viewer:** Allows you to view on your TV screen digital images that are stored on Memory Stick media.
- **Component Video Inputs:** Offers the best video quality for DVD (480p, 480i), and digital set-top box (HD1080i, 720p) connections.
- **HD Detailer™:** Wideband video amplifier has a high bandwidth frequency rating, which allows it to send more video information to the screen, resulting in finer picture quality, especially for HD sources.
- **CineMotion™:** Reverse 3-2 pulldown processing provides optimal picture quality for film-based sources (media originally shot in 24 frames-per-second format).
- **Parental Control:** V-Chip technology allows parents to block unsuitable programming from younger viewers.
- **Digital Visual Interface (DVI):** Can accommodate a copy-protected digital connection (HDCP*) to other devices (such as digital set-top boxes) that have compatible interfaces. The DVI-HDTV input terminal is compliant with the EIA-861 standard and is not intended for use with personal computers.

*High-bandwidth Digital Content Protection

Setting Up the TV

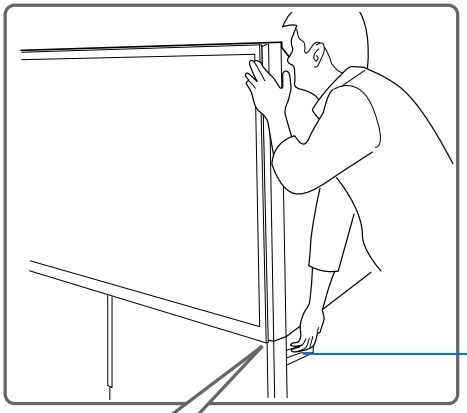
Overview

This chapter includes illustrated instructions for setting up your TV.

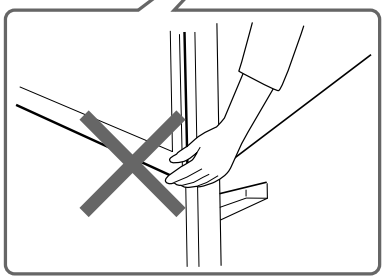
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Carrying Your Projection TV

Carrying the TV requires four or more people. The TV is equipped with casters for easy movement on a hard surface. Be sure to move your projection TV using the casters. The TV includes handles that you can use to carry the unit.

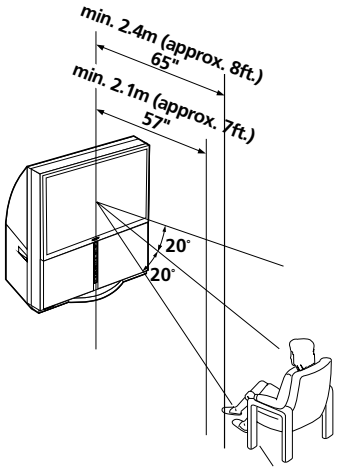


Handle (one on each side)

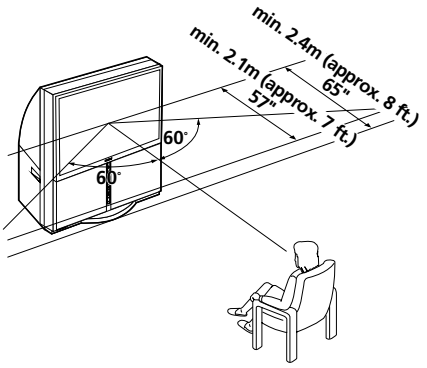


Do not carry the TV by placing hands under the front screen

Installing the TV



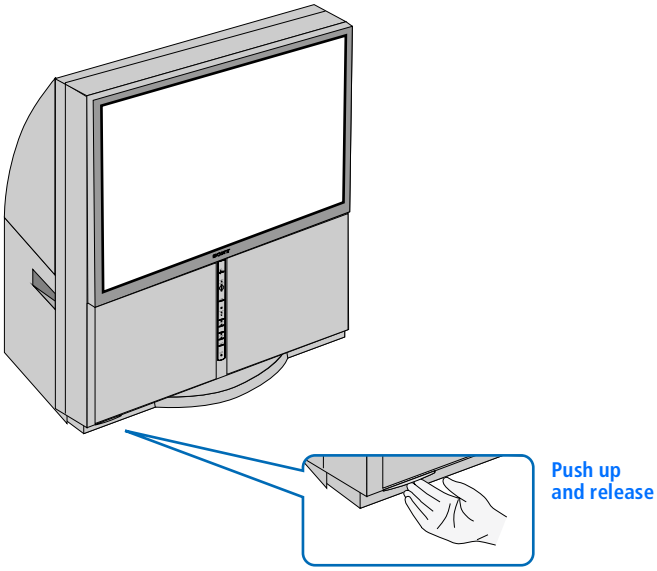
Recommended Vertical Viewing Angle



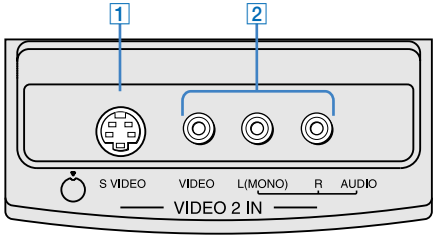
Recommended Horizontal Viewing Angle

TV Controls and Connectors

To access the front video panel, push up and then release. The panel drops down automatically (KP-57/65WV700 shown).

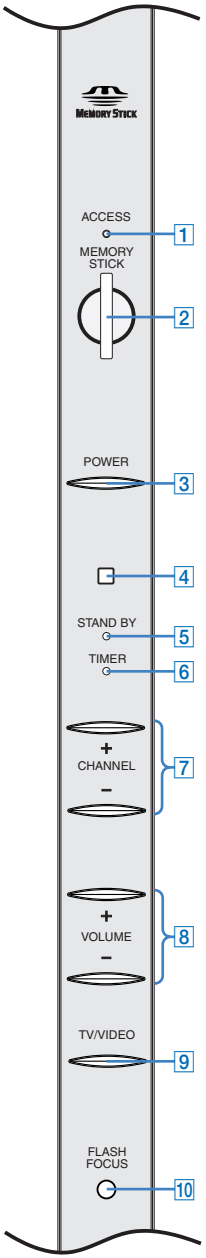


Front Video Controls



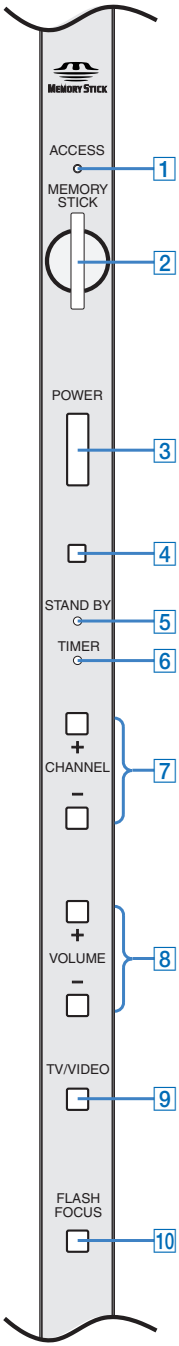
1	S VIDEO VIDEO 2 INPUT	Connects to the S VIDEO OUT jack on your camcorder or other video equipment that has S VIDEO. Provides better picture quality than composite video (2).
2	VIDEO/L(MONO)-AUDIO-R VIDEO 2 INPUT	Connects to the composite A/V output jacks on your camcorder or other video equipment.

KP-57/65WV600 Front Panel



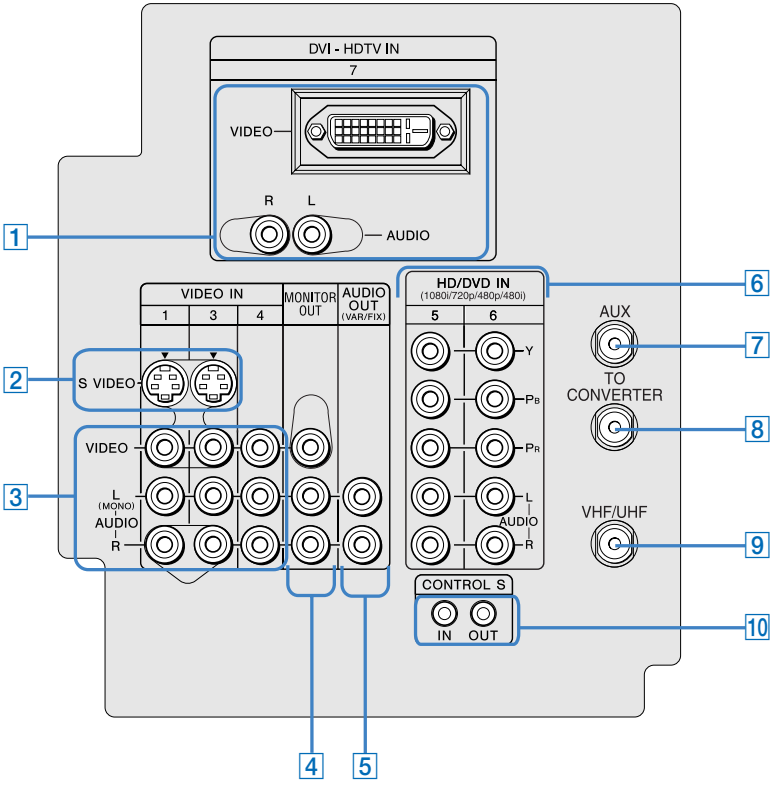
Item		Description
1	MEMORY STICK ACCESS LED	When lit, indicates that the Memory Stick is being read. (Do not remove the Memory Stick when the indicator is lit.)
2	MEMORY STICK	Memory Stick insertion slot. For details, see “Inserting and Removing a Memory Stick” on page 66.
3	POWER	Press to turn on and off the TV.
4	Infrared Receiver (IR)	Receives IR signals from the TV’s remote control.
5	STAND BY LED	Blinks when the TV is turned on, then shuts off when the picture is displayed. If the LED blinks continuously, this may indicate the TV needs service (see “Contacting Sony” on page 90).
6	TIMER LED	When lit, indicates one of the timers is set. When the timer is set, this LED will remain lit even if the TV is turned off. For details, see page 84.
7	-CHANNEL+	Press to scan through channels. To scan quickly through channels, press and hold down either CHANNEL button.
8	-VOLUME +	Press to adjust the volume.
9	TV/VIDEO	Press repeatedly to cycle through the video equipment connected to the TV’s video inputs.
10	FLASH FOCUS	Press to adjust the convergence (see page 44).

KP-57/65WV700 Front Panel



Item		Description
1	MEMORY STICK ACCESS LED	When lit, indicates that the Memory Stick is being read. (Do not remove the Memory Stick when the indicator is lit.)
2	MEMORY STICK	Memory Stick insertion slot. For details, see “Inserting and Removing a Memory Stick” on page 66.
3	POWER	Press to turn on and off the TV.
4	Infrared Receiver (IR)	Receives IR signals from the TV’s remote control.
5	STAND BY LED	Blinks when the TV is turned on, then shuts off when the picture is displayed. If the LED blinks continuously, this may indicate the TV needs service (see “Contacting Sony” on page 90).
6	TIMER LED	When lit, indicates one of the timers is set. When the timer is set, this LED will remain lit even if the TV is turned off. For details, see page 84.
7	-CHANNEL+	Press to scan through channels. To scan quickly through channels, press and hold down either CHANNEL button.
8	-VOLUME +	Press to adjust the volume.
9	TV/VIDEO	Press repeatedly to cycle through the video equipment connected to the TV’s video inputs.
10	FLASH FOCUS	Press to adjust the convergence (see page 44).

Rear Panel


DVI - HDTV IN
7
VIDEO
R
L
AUDIO
1
VIDEO IN
1
3
4
MONITOR OUT
AUDIO OUT (VAR/FIX)
2
S VIDEO
VIDEO
3
L (MONO) AUDIO R
HD/DVD IN
(1080i/720p/480p/480i)
5
6
Y
PB
PR
L AUDIO R
6
AUX
7
TO CONVERTER
8
VHF/UHF
9
CONTROL S
IN
OUT
10
4
5

Jack	Description
1 DVI-HDTV VIDEO AUDIO R/L (VIDEO 7 IN)	Can accommodate a copy-protected digital connection (HDCP*) to other devices (such as digital set-top boxes) that have compatible interfaces. The DVI-HDTV input terminal is compliant with the EIA-861 standard and is not intended for use with personal computers. See the instruction manual that came with your equipment for details about connecting and using it with the TV.
2 S VIDEO IN 1/3	Connects to the S VIDEO OUT jack of your VCR or other video equipment that has S VIDEO. S VIDEO provides better picture quality than either composite video (3) or VHF/UHF (9) connections.
3 VIDEO IN 1/3/4 VIDEO/L(MONO) -AUDIO-R	Connect to the composite A/V output jacks on your VCR or other video component. A fourth component A/V input jack (VIDEO 2) is located on the front panel of the TV. These video connections provide better picture quality than the VHF/UHF (9) connections.
4 MONITOR OUT	Lets you record the program you are watching to a VCR. When two VCRs are connected, you can use the TV as a monitor for tape-to-tape editing (not available with 480p, 720p, or 1080i when the input is set to VIDEO 5-7).
5 AUDIO OUT (VAR/FIX) L (MONO)/R	Connects to the left and right audio input jacks of your audio or video equipment. You can use these outputs to listen to your TV's audio through your stereo system.
6 HD/DVD IN 5/6 (1080i/720p/480p/480i)	Connect to your DVD player's or digital set-top box's component video (Y, PB, PR) and audio (L/R) jacks. Component video provides better picture quality than 2, 3, or 9).
7 AUX	Auxiliary RF input that connects to your antenna, CATV cable, or cable box output jack. This is convenient if you are using two VHF/UHF sources (antenna, CATV cable, or cable box). For details, see pages 20 to 23.
8 TO CONVERTER	Connects to your cable box input jack. This VHF/UHF output jack lets you set up your TV to switch between scrambled channels (coming through a cable box) and unscrambled cable channels. Use this jack instead of a splitter to get better picture quality when you need to switch between scrambled and unscrambled cable channels. For details, see pages 22 to 23.
9 VHF/UHF	Primary RF input that connects to your VHF/UHF antenna or cable.
10 CONTROL S IN/OUT	Allows the TV to receive (IN) and send (OUT) remote control signals to other Sony infrared-controlled audio or video equipment that has the CONTROL S function.

*High-bandwidth Digital Content Protection

Basic Connections: Connecting a Cable or Antenna

The way in which you will connect your TV varies, depending on how your home receives a signal (cable, cable box, antenna) and whether or not you plan to connect a VCR.

If You Are Connecting	*See Page*
Cable or Antenna Only ❑ No cable box or VCR	19
Cable and Antenna Only ❑ No cable box or VCR	20
Cable Box and Cable Only ❑ Cable box unscrambles only some channels (usually premium channels) ❑ No VCR	22
Cable Box Only ❑ Cable box unscrambles all channels ❑ No VCR	24

If you are connecting a VCR

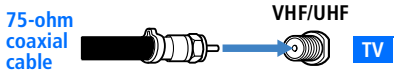
❑ See the connections described on pages 26 and 28.

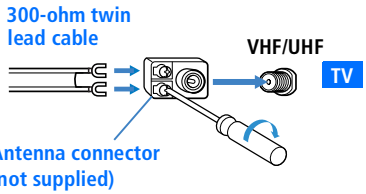
Cable or Antenna Only

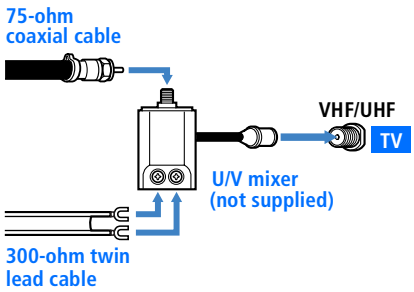
For best results, use one of the following connections if you are connecting a cable or an antenna and you:

- ❑ Do not need a cable box to unscramble channels. (If you have a cable box, see pages 22-24.)
- ❑ Do not intend to connect a VCR. (If you have a VCR, see pages 26 and 28.)

The connection you choose depends on the cable type you have in your home, as described below.

75-ohm coaxial cable (usually found in newer homes)	
Cable Type	***Connect As Shown***
VHF Only or combined VHF/UHF or Cable	

300-ohm twin lead cable (usually found in older homes)	
Cable Type	***Connect As Shown***
VHF Only or UHF Only or combined VHF/UHF	

75-ohm coaxial and 300-ohm twin lead cable (found in some homes)	
Cable Type	***Connect As Shown***
VHF and UHF	

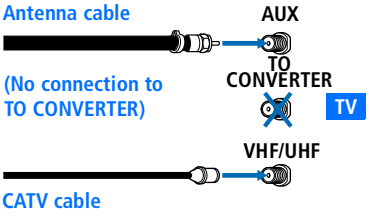
Cable and Antenna Only

For best results, use this connection if you:

- ❑ Have a cable and an antenna.

  (This is convenient if you are using a separate rooftop antenna to receive additional channels that are not provided by your cable company.)

- ❑ Do not have a cable box or VCR. (If you have a cable box, see pages 22 to 24. If you have a VCR, see pages 26 and 28.)

Cable Type	*Connect As Shown*
Cable TV (CATV) and Antenna	

About Using This Connection with Dual Picture (Twin View, etc.) Features

With this connection, you cannot view antenna channels in the right dual picture window.

Notes on Using This Connection

To Do This ...	Do This ...
Switch the TV's input between the cable and antenna	Press ANT to switch back and forth between the TV's VHF/UHF and AUX inputs.
Receive channels using an antenna, instead of the cable	1 Press ANT to switch to the AUX input. 2 Set the Cable option to Off. For details, see "Selecting Channel Options" on page 78. 3 Run the Auto Setup program, as described in "Using Auto Setup" on page 43.

Cable Box and Cable Only

For best results, use this connection if:

- Your cable company scrambles some channels, such as premium channels (which requires you to use a cable box), but does not scramble all channels.
- You do not have a VCR. (If you have a VCR, see pages 26 and 28.)

With this connection you can:

- Use the TV remote control to change channels coming through the cable box to the TV's AUX input jack. (You must first program the remote control for your specific cable box; see "Programming the Remote Control" on page 51.)
- Use the TV remote control to change channels coming directly into the TV's VHF/UHF input. (The TV's tuner provides a better signal than the cable box.)

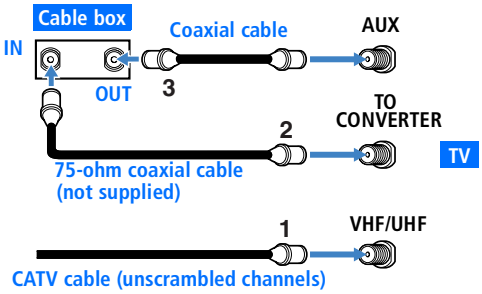
About Using This Connection with Dual Picture (Twin View, etc.) Features

With this connection, you can use all the dual picture features for unscrambled channels coming directly into the TV's VHF/UHF input jack.

However, you can use only some of the dual picture features for channels coming through the cable box to the TV's AUX input jack. For example, when you switch the TV's input to AUX — to select the cable box input — the picture displays only in the left window. For example, if you turn on Twin View, you can watch cable channels coming into the VHF/UHF jack in the right window, but you cannot swap the pictures between the left and right windows.

To connect the cable box and cable

1. Connect the cable from your cable company to the TV's VHF/UHF jack.
2. Use a coaxial cable to connect the TV's TO CONVERTER jack to the cable box's input jack. (The TV's internal converter lets you switch between unscrambled signals coming straight into the TV and scrambled signals coming in through the cable box, eliminating the need for an external splitter.)
3. Use a coaxial cable to connect the cable box's output jack to the TV's AUX jack.
4. Run the Auto Setup program, as described in "Setting Up the Channel List" on page 43.



Notes on Using This Connection

To Do This ...	*Do This ...*
Use the cable box	Tune the TV to the channel the cable box is set to (usually channel 3 or 4) and then use the cable box to switch channels.
Set up the TV remote control to operate the cable box	Program the remote control. See "Programming the Remote Control" on pages 51-52.
Activate the remote control to operate the cable box	Press SAT/CABLE FUNCTION.
Prevent the accidental switching of TV channels	When using the cable box, you need the TV to stay on the channel the cable box is set to (usually channel 3 or 4). You can use the TV's Channel Fix feature to lock in a specific channel. For details, see "Using the Channel Menu" on page 78.
Switch the TV's input between the cable box and cable	Press ANT to switch back and forth between the TV's VHF/UHF (unscrambled channels) and AUX (scrambled) inputs.

Cable Box Only

For best results, use this connection if:

- ❑ Your cable company scrambles all channels, which requires you to use a cable box.
- ❑ You do not have a VCR. (If you have a VCR, see pages 26 and 28.)

With this connection you can:

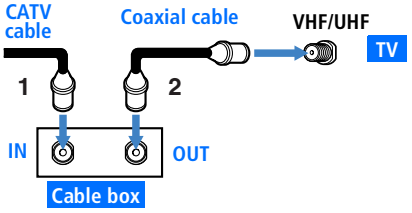
- ❑ Use the TV remote control to change channels coming through the cable box to the TV's VHF/UHF jack. (You must first program the remote control for your specific cable box.)

About Using This Connection with Dual Picture (Twin View, etc.) Features

With this connection, all channels come into the TV through your cable box and only one unscrambled signal is sent to the TV, so you cannot use the dual picture features. If some of your channels are scrambled, but others are not, consider using the "Cable Box and Cable" connection on page 22 instead.

To connect the cable box

1. Connect the CATV cable to the cable box's input jack.
2. Use a coaxial cable to connect the cable box's output jack to the TV's VHF/UHF jack.
3. Run the Auto Setup program, as described in "Setting Up the Channel List" on page 43.



Notes on Using This Connection

To Do This ...	*Do This ...*
Use the cable box	Tune the TV to the channel the cable box is set to (usually channel 3 or 4) and then use the cable box to switch channels.
Set up the TV remote control to operate the cable box	Program the remote control. See "Programming the Remote Control" on pages 51-52.
Activate the remote control to operate the cable box	Press SAT/CABLE FUNCTION.
Prevent the accidental switching of TV channels	When using the cable box, you need the TV to stay on the channel the cable box is set to (usually channel 3 or 4). You can use the TV's Channel Fix feature to lock in a specific channel. For details, see "Using the Channel Menu" on page 78.

Connecting Optional Equipment

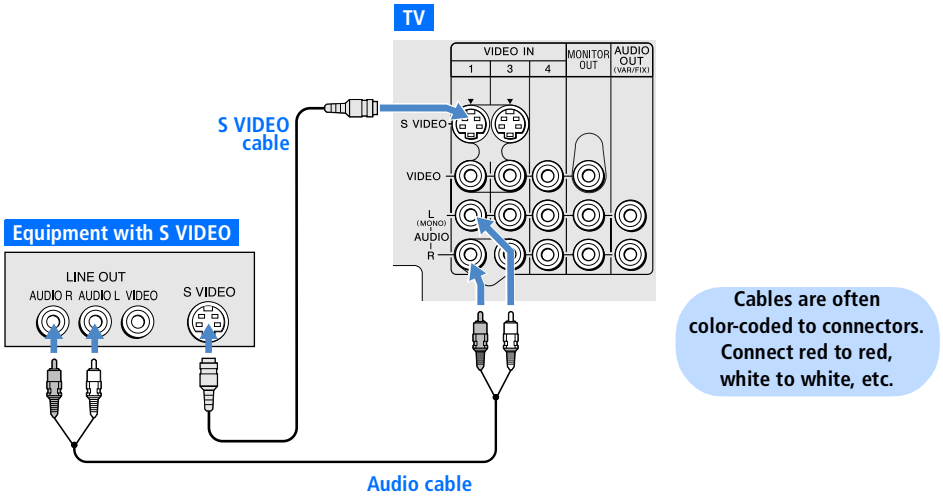
Use the directions in this section to connect the following optional equipment:

If You Are Connecting	See Page
VCR and Cable	26
VCR and Cable Box	28
Two VCRs for Tape Editing	30
Satellite Receiver	32
Satellite Receiver and VCR	34
DVD Player with Component Video Connectors	36
DVD Player with S VIDEO and Audio Connectors	38
Camcorder	40
Audio Receiver	41

About Using S VIDEO

If the optional equipment you are connecting has an S VIDEO jack (shown at left), you can use an S VIDEO cable for improved picture quality (compared to an A/V cable). Because S VIDEO carries only the video signal, you also need to connect audio cables for sound, as shown below.

Example of an S VIDEO Connection



VCR and Cable

For best results, use this connection if:

- ❑ Your cable company does not require you to use a cable box.

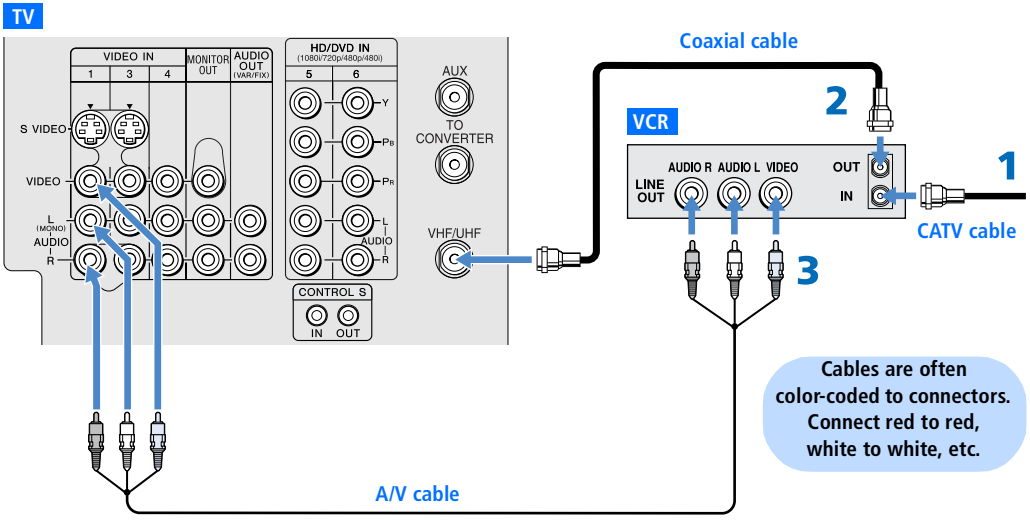
About Using This Connection with Dual Picture (Twin View, etc.) Features

With this connection, you can use all the dual picture features.

Using S VIDEO jacks? See page 25.

To connect the VCR and cable

1. Connect the CATV cable to the VCR's VHF/UHF input jack.
2. Use a coaxial cable to connect the VCR's VHF/UHF output jack to the TV's VHF/UHF jack.
3. Use an A/V cable to connect the VCR's A/V output jacks to the TV's A/V input jacks.
4. Run the Auto Setup program, as described in "Setting Up the Channel List" on page 43.



Notes on Using This Connection

To Do This ...	*Do This ...*
Watch the VCR	Press TV/VIDEO repeatedly to select the VCR input (VIDEO 1 in the illustration).
Watch cable channels	Press TV/VIDEO repeatedly to select the cable input (VHF/UHF in the illustration).
Set up the TV remote control to operate the VCR	If you have a non-Sony VCR, you must program the remote control. See "Programming the Remote Control" on pages 51-52.
Activate the TV remote control to operate the VCR	Open the outside cover, as shown on page 50. Then set the A/V slide switch to the position you programmed for the VCR.
Control VCR functions with the TV remote control	See "Operating a VCR" on page 53.
Label video inputs to easily identify equipment connected to the TV	See the instructions for setting up Video Labels on pages 83-84.

VCR and Cable Box

For best results, use this connection if:

- ❑ Your cable company scrambles some channels, such as premium channels (which requires you to use a cable box), but does not scramble all channels.

About Using This Connection with Dual Picture (Twin View, etc.) Features

With this connection, you can use all the dual picture features.

With this connection you can:

- ❑ Use the TV remote control to change channels coming through the cable box. (You must first program the remote control for your specific cable box; see "Programming the Remote Control" on page 51.)
- ❑ Use the TV remote control to change channels coming directly into the TV's VHF/UHF jack. (The TV's tuner provides a better signal than the cable box.)
- ❑ Record channels coming through the cable box and channels coming directly into the TV.

To connect a VCR and cable box, you need:

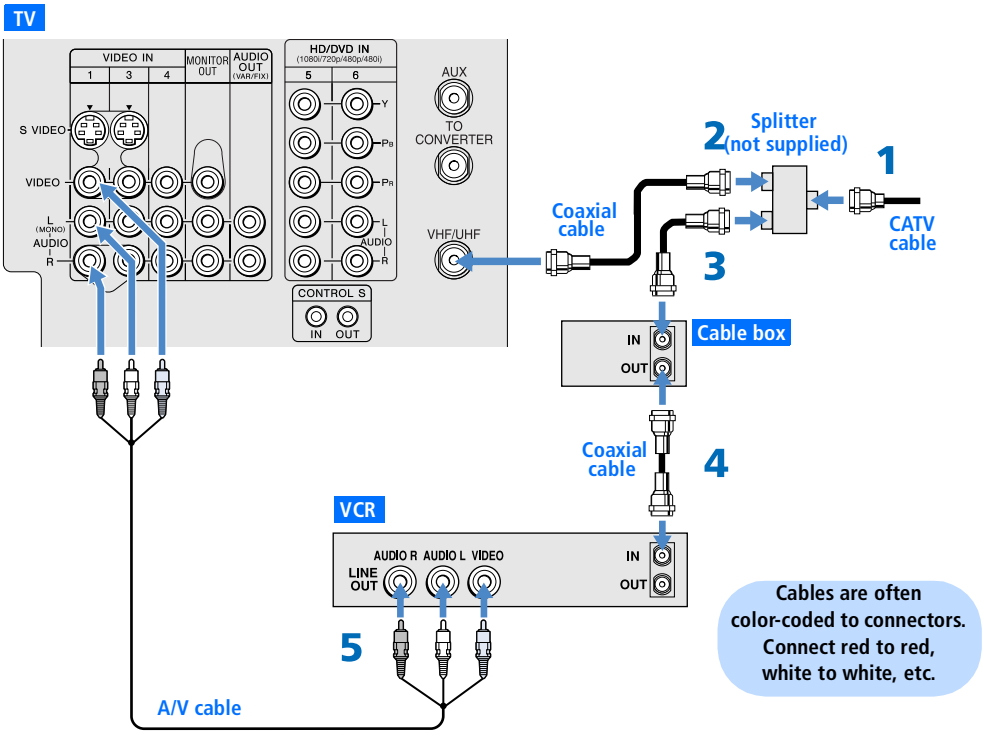
- ❑ A splitter, which is a small, inexpensive device that you can purchase at your local electronics store.
- ❑ Three coaxial cables.
- ❑ One A/V cable or one S VIDEO cable with audio cables.

To connect the VCR and cable box

1. Connect the CATV cable to the single (input) jack of the splitter.
2. Use a coaxial cable to connect one of the splitter's two output jacks to the TV's VHF/UHF jack.
3. Use a coaxial cable to connect the splitter's other output jack to the cable box's input jack.
4. Use a coaxial cable to connect the cable box's output jack to the VCR's RF input jack.
5. Use an A/V cable to connect the VCR's A/V output jacks to the TV's A/V input jacks.
6. Run the Auto Setup program, as described in "Setting Up the Channel List" on page 43.



Using S VIDEO jacks? See page 25.



Notes on Using This Connection

To Do This ...	*Do This ...*
Watch cable (unscrambled) channels	Press TV/VIDEO repeatedly to select the cable input (UHF/VHF in the illustration).
Watch cable box (scrambled) channels	Turn on the VCR and tune it to the channel the cable box is set to (usually channel 3 or 4). Press TV/VIDEO repeatedly to select the VCR input (VIDEO 1 in the illustration). Use the cable box to change channels.
Watch the VCR	Press TV/VIDEO repeatedly to select the VCR input (VIDEO 1 in the illustration).
Set up the TV remote control to operate the cable box or VCR	If you have a non-Sony VCR, you must program the remote control. See “Programming the Remote Control” on pages 51-52.
Activate the remote control to operate the cable box or VCR	For the cable box, press SAT/CABLE FUNCTION. For the VCR, open the outside cover, as shown on page 50. Then set the A/V slide switch to the position you programmed for the VCR.
Control specific cable box and VCR functions with the TV remote control	See “Operating a Cable Box” on page 54 and “Operating a VCR” on page 53.
Label video inputs to easily identify equipment connected to the TV	See the instructions for setting up Video Labels on pages 83-84.

Two VCRs for Tape Editing

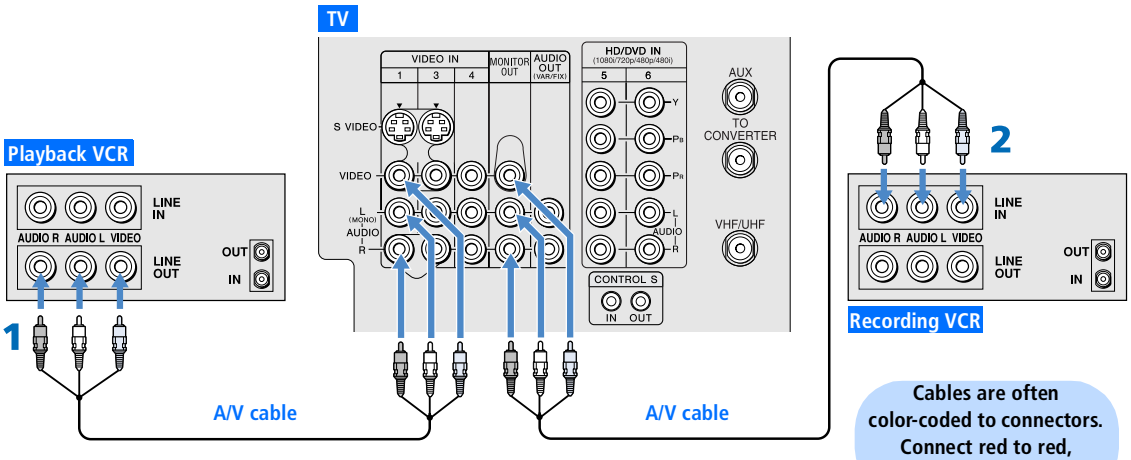
Connecting two VCRs lets you record from one VCR to the other. By connecting them as shown below, you can view (monitor) what is being recorded.

Using S VIDEO jacks? See page 25.

To connect two VCRs for tape editing

1 Use an A/V cable to connect the playback VCR's A/V output jacks to the TV's A/V input jacks.

2 Use an A/V cable to connect the recording VCR's A/V input jacks to the TV's MONITOR OUT jacks.



Cables are often color-coded to connectors. Connect red to red, white to white, etc.

Notes on Using This Connection

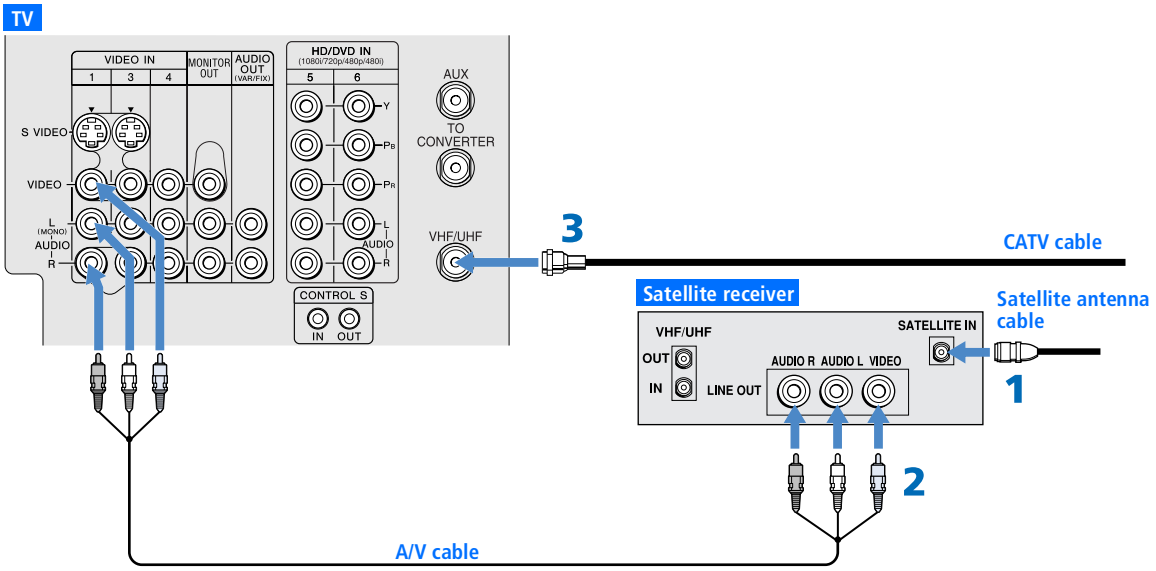
To Do This ...	*Do This ...*
View (monitor) what is being recorded	Press TV/VIDEO repeatedly to select the VCR input (VIDEO 1 in the illustration above).
Set up the TV remote control to operate the VCR(s)	If you have a non-Sony VCR, you must program the remote control. See "Programming the Remote Control" on pages 51-52.
Activate the TV remote control to operate the VCR(s)	Open the outside cover, as shown on page 50. Then set the A/V slide switch to the position you programmed for the VCR.
Control VCR functions with the TV remote control	See "Operating a VCR" on page 53.
Label video inputs to easily identify equipment connected to the TV	See the instructions for setting up Video Labels on pages 83-84.

Satellite Receiver

Using S VIDEO jacks? See page 25.

To connect a satellite receiver

1. Connect the satellite antenna cable to the satellite receiver's satellite input jack.
2. Use an A/V cable to connect the satellite receiver's A/V output jacks to the TV's A/V input jacks.
3. Connect a CATV cable from your cable or antenna to the TV's VHF/UHF jack.
4. Run the Auto Setup program, as described in "Setting Up the Channel List" on page 43.



Cables are often color-coded to connectors. Connect red to red, white to white, etc.

Notes on Using This Connection

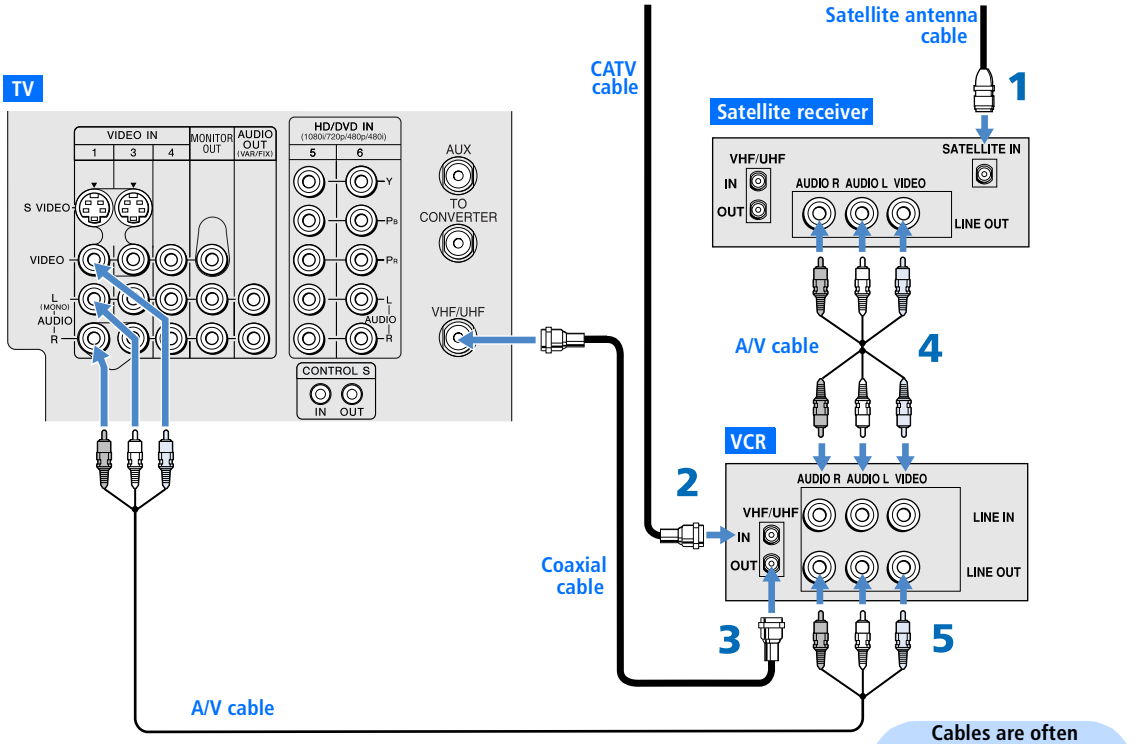
To Do This ...	*Do This ...*
Watch the satellite receiver	Press TV/VIDEO repeatedly to select the satellite receiver input (VIDEO 1 in the illustration).
Set up the TV remote control to operate the satellite receiver	If you have a non-Sony satellite receiver, you must program the remote control. See “Programming the Remote Control” on pages 51-52.
Activate the TV remote control to operate the satellite receiver	Press SAT/CABLE FUNCTION.
Control satellite receiver functions with the TV remote control	See “Operating a Satellite Receiver” on page 53.
Label video inputs to easily identify equipment connected to the TV	See the instructions for setting up Video Labels on pages 83-84.

Satellite Receiver and VCR

Using S VIDEO jacks? See page 25.

To connect a satellite receiver and VCR

1. Connect the satellite antenna cable to the satellite receiver's satellite input jack.
2. Connect the CATV cable to the VCR's VHF/UHF input jack.
3. Use a coaxial cable to connect the VCR's VHF/UHF output jack to the TV's VHF/UHF jack.
4. Use an A/V cable to connect the satellite receiver's A/V output jacks to the VCR's A/V input jacks.
5. Use an A/V cable to connect the VCR's A/V output jacks to the TV's A/V input jacks.
6. Run the Auto Setup program, as described in "Setting Up the Channel List" on page 43.



Cables are often color-coded to connectors. Connect red to red, white to white, etc.

Notes on Using This Connection

To Do This ...	Do This ...
Watch the satellite receiver	Press TV/VIDEO repeatedly to select the VCR input (VIDEO 1 in the illustration). The VCR may need to be turned on and set to the satellite receiver input.
Watch the VCR	Press TV/VIDEO repeatedly to select the input to which the VCR is connected (VIDEO 1 in the illustration).
Set up the TV remote control to operate the satellite receiver or VCR	If you have a non-Sony VCR or satellite receiver, you must program the remote control. See “Programming the Remote Control” on pages 51-52.
Activate the TV remote control to operate the satellite receiver or VCR	For the satellite receiver, press SAT/CABLE FUNCTION. For the VCR, open the outside cover, as shown on page 50. Then set the A/V slide switch to the position you programmed for the VCR.
Control satellite receiver and VCR functions with the TV remote control	See “Operating a Satellite Receiver” on page 53 and “Operating a VCR” on page 53.
Label video inputs to easily identify equipment connected to the TV	See the instructions for setting up Video Labels on pages 83-84.

DVD Player with Component Video Connectors

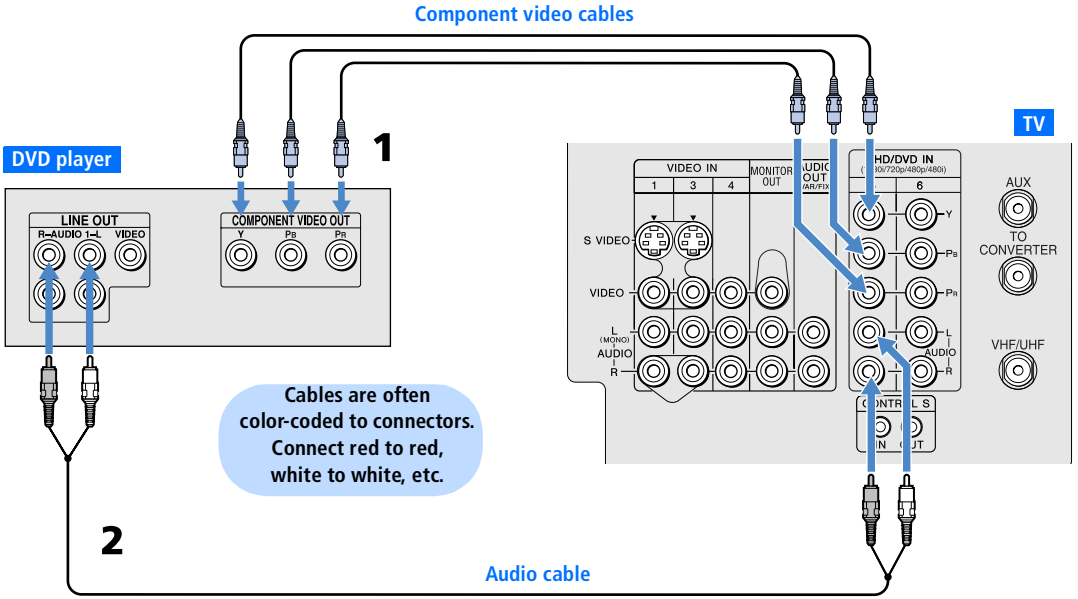
For best results, use this connection if your DVD player has component video (Y, PB, PR) jacks.

To connect a DVD player with component video connectors

1 Use a component video cable, or three composite video cables, to connect the DVD player's Y, PB and PR jacks to the Y, PB and PR jacks (VIDEO 5) on the TV.

> ✍ **The Y, PB and PR jacks on your DVD player are sometimes labeled Y, CB and CR, or Y, B-Y and R-Y. If so, connect the cables to like colors.**

2 Use an audio cable to connect the DVD player's audio output jacks to the TV's VIDEO 5 audio input jacks.



Notes on Using This Connection

To Do This ...	*Do This ...*
Watch the DVD player	Press TV/VIDEO repeatedly to select the DVD input (VIDEO 5 in the illustration).
Set up the TV remote control to operate the DVD player	If you have a non-Sony DVD player, you must program the remote control. See “Programming the Remote Control” on pages 51-52.
Activate the TV remote control to operate the DVD player	Open the outside cover, as shown on page 50. Then set the A/V slide switch to the position you programmed for the DVD player.
Control DVD functions with the TV remote control	See “Operating a DVD Player” on page 54.
Label video inputs to easily identify equipment connected to the TV	See the instructions for setting up Video Labels on pages 83-84.

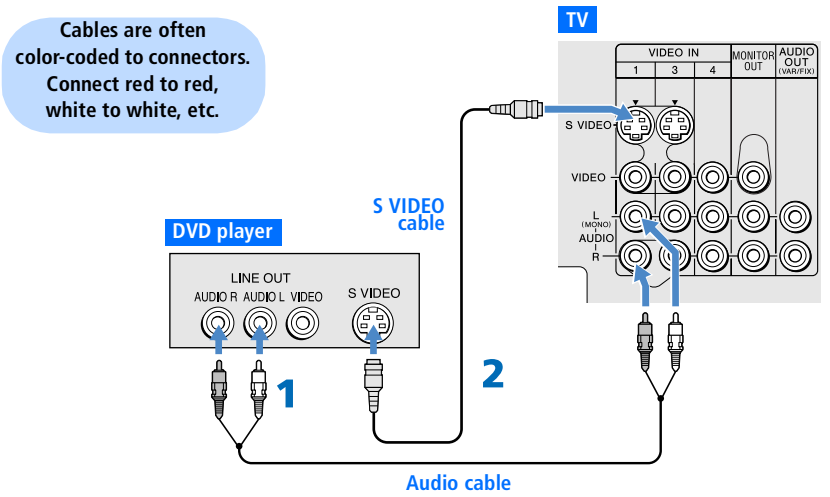
✍ **You cannot record the signal from any equipment connected into the Y, PB, PR jacks.**

DVD Player with S VIDEO and Audio Connectors

Use this connection if your DVD player does not have component video (Y, PB, PR) jacks.

To connect a DVD player with A/V connectors

1. Use an audio cable to connect the DVD player's audio output jacks to the TV's audio input jacks.
2. Use an S VIDEO cable to connect the DVD player's S VIDEO jack to the TV's S VIDEO jack.



Notes on Using This Connection

To Do This ...	*Do This ...*
Watch the DVD player	Press TV/VIDEO repeatedly to select the DVD input (VIDEO 1 in the illustration).
Set up the TV remote control to operate the DVD player	If you have a non-Sony DVD player, you must program the remote control. See "Programming the Remote Control" on pages 51-52.
Activate the TV remote control to operate the DVD player	Open the outside cover, as shown on page 50. Then set the A/V slide switch to the position you programmed for the DVD player.
Control DVD functions with the TV remote control	See "Operating a DVD Player" on page 54.
Label video inputs to easily identify equipment connected to the TV	See the instructions for setting up Video Labels on pages 83-84.

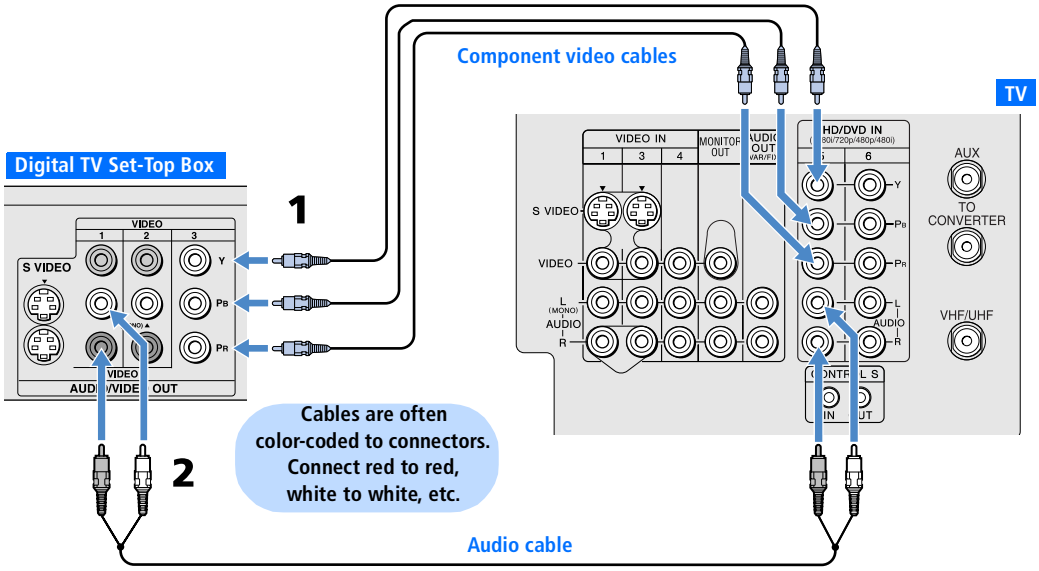
Digital TV Set-Top Box with Component Video Connectors

To connect a digital TV set-top box with component video connectors

1 Use three separate component video cables to connect the DVD player's Y, PB and PR jacks to the Y, PB and PR jacks (VIDEO 5) on the TV.

> ✍ **The Y, PB and PR jacks on your DVD player are sometimes labeled Y, CB and CR, or Y, B-Y and R-Y. If so, connect the cables to like colors.**

2 Use an audio cable to connect the set-top box's audio output jacks to the TV's VIDEO 5 audio input jacks.



Notes on Using This Connection

To Do This ...	*Do This ...*
Watch the digital TV set-top box	Press TV/VIDEO repeatedly to select the digital TV set-top box input (VIDEO 5 in the illustration).
Label video inputs to easily identify equipment connected to the TV	See the instructions for setting up Video Labels on pages 83-84.

> ✍ **You cannot record the signal from any equipment connected into the Y, PB, PR jacks.**

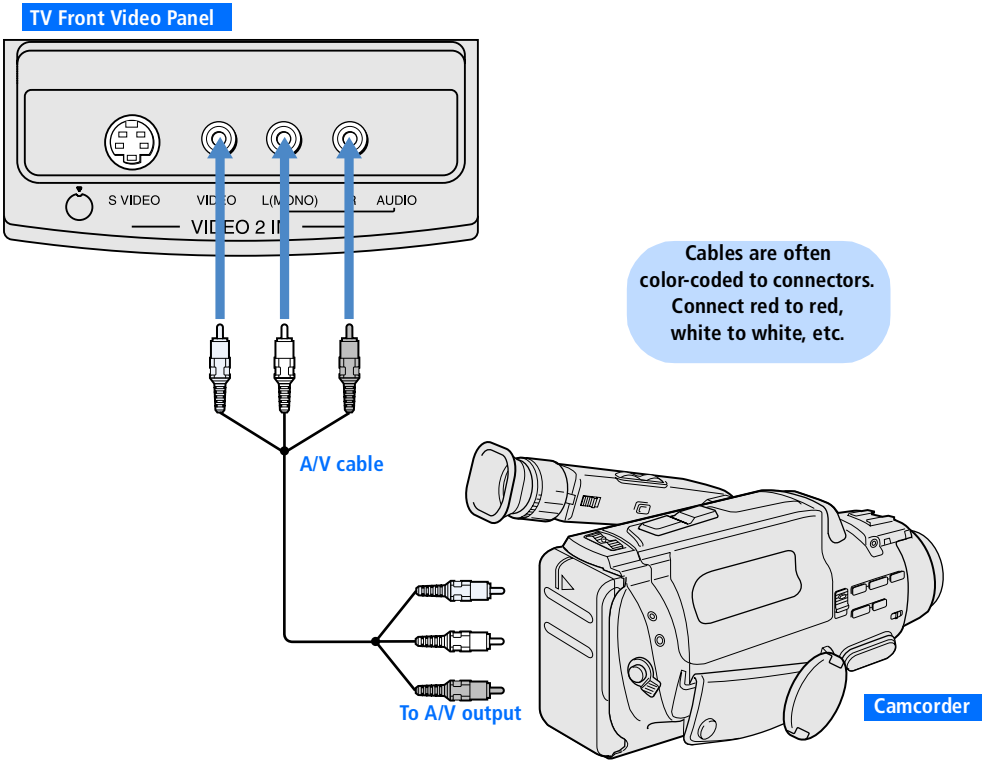
Camcorder

For easy connection of a camcorder, the TV has front A/V input jacks. If you prefer, however, you can connect the camcorder to the TV's rear A/V input jacks.

Using S VIDEO jacks? See page 25.

To connect a camcorder

1. Open the front video panel, as shown on page 13.
2. Use A/V cables to connect the camcorder's A/V output jacks to the TV's A/V input jacks.



If you have a mono camcorder, connect its audio output jack to the TV's L MONO audio jack.

Notes on Using This Connection

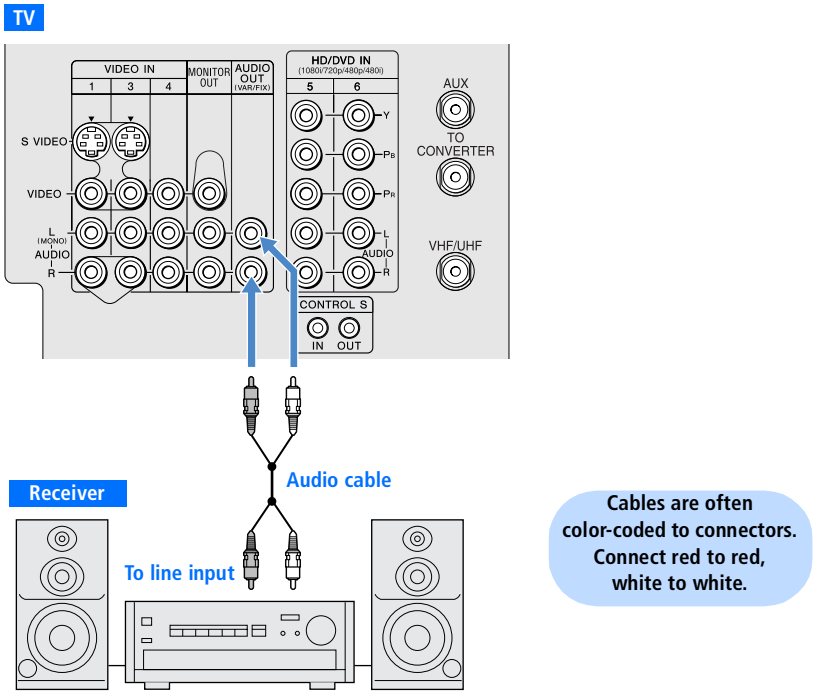
To Do This ...	*Do This ...*
Watch the camcorder	Press TV/VIDEO repeatedly to select the camcorder input (VIDEO 2 in the illustration).
Label video inputs to easily identify equipment connected to the TV	See the instructions for setting up Video Labels on pages 83-84.

Audio Receiver

For improved sound quality, you may want to play the TV's audio through your stereo system.

To connect an audio system

1 Use an audio cable to connect the TV's audio output jacks to the audio receiver's line input jacks.



2 Using the TV's Audio Menu, set the Speaker option to Off. Then set the Audio Out option to Fixed or Variable, depending on how you want to control the volume. For details, see "Using the Audio Menu" on page 74.

3 Turn on the audio receiver, and then set the receiver's line input to the jack into which you connected the TV.

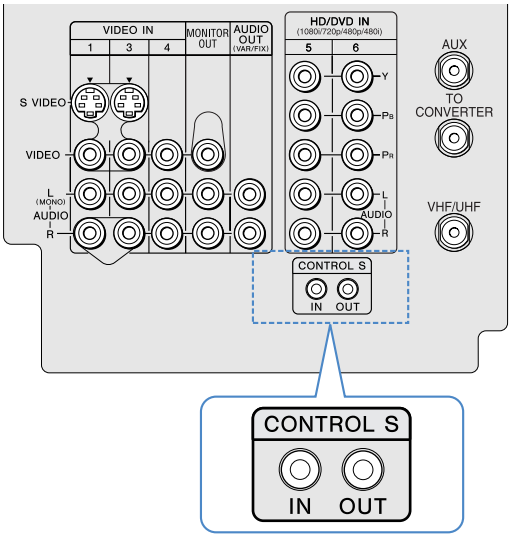
Using the CONTROL S Feature

CONTROL S allows you to control your system and other Sony equipment with one remote control. In addition to allowing you to control multiple devices with one remote control, the CONTROL S feature allows you to always point your remote control at your TV, instead of having to point it at the other equipment, which might be hidden or out of direct line of sight.

Use CONTROL S IN to send signals to the TV.

Use CONTROL S OUT to send signals to connected equipment.

TV



Setting Up the Channel List

After you finish connecting your TV, you need to run Auto Setup to set up your channels. The Auto Setup screen appears when you turn on your TV for the first time after hooking it up. If you do not want to set up the channels at this time, you can do it later by selecting the Auto Program option in the Channel Menu (see page 78).

✍ **The Auto Setup feature does not apply for installations that use a cable box for all channel selection.**

Using Auto Setup

1. Press POWER to turn on the TV.
2. Press TV FUNCTION on the remote control.
3. To continue running Auto Setup, press CH+. To exit Auto Setup, press CH-.

Auto Setup automatically creates a list of receivable channels. When finished, the lowest numbered channel is displayed.

To reset the TV to factory settings

1. Press POWER to turn on the TV.
2. Hold down RESET on the remote control.
3. Press TV POWER on the TV. (The TV will turn itself off, then back on.)
4. Release RESET.

Adjusting the Convergence Automatically (Flash Focus)

The projection tube image appears on the screen in three colors (red, green and blue). If they do not converge, the color is poor and the picture blurs. Before you use your TV, be sure to adjust the convergence. The Flash Focus feature allows you to adjust the convergence automatically.

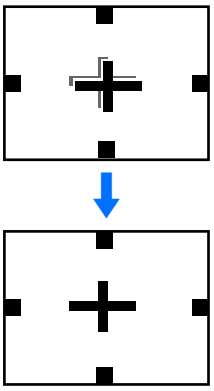
It is recommended that you perform Flash Focus about 30 minutes after the TV is first turned on.

You can also access Flash Focus in the Setup menu. For details, see page 85.

1 Tune to a TV or cable TV program.

2 Press the FLASH FOCUS button on the front panel of the TV (see pages 14-15).

The cross pattern appears and Flash Focus begins to work.



The adjustment is completed when the TV picture returns.

To Obtain Optimum Convergence

Whenever you find that the picture blurs, press FLASH FOCUS.

You cannot perform any other functions until Flash Focus has completed its cycle. If you perform any other operation while Flash Focus is in progress, the Flash Focus operation is canceled.

To Perform Additional Fine Manual Adjustments

❑ Use the Convergence feature, described on page 45.

Adjusting the Convergence Manually

The Convergence feature gives you more control over the picture's convergence than the Flash Focus feature, allowing you to fine-tune the convergence.

Before using the manual Convergence, you must first perform Flash Focus (as described on page 44).

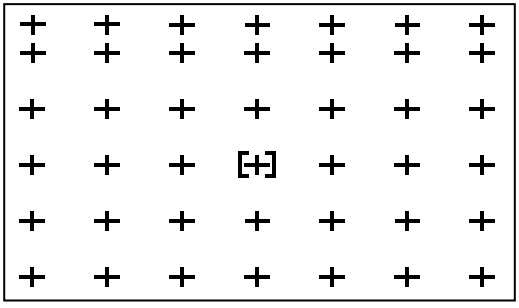
For details on using the Setup Menu, see page 83.

1 Press MENU to display the Menu.

2 Move the joystick ← or → to highlight the Setup icon and press ⊕.

3 Move the joystick to highlight Convergence and press ⊕.

A pattern of white crosses appears, with a yellow [ ] around one of the crosses. Aligned crosses (which do not need adjustment) look white and have little or no red or blue showing. Crosses that are not aligned show red or blue shades beyond their edges.



You can scroll up and down through the 9 x 7 field of crosses to manually converge all portions of the screen.

4 Using the joystick, move the [ ] to surround a cross that you want to adjust. Press ⊕. The [ ] changes to red.

5 If the cross that you selected has red edges, move the joystick until the red image is replaced with a white cross. Once you have finished this (or the cross does not have red edges), press ⊕. The [ ] changes to blue.

6 If the cross you selected has blue edges, move the joystick until the blue image is replaced with a white cross. Once you have finished this, press ⊕. The [ ] changes to yellow again.

7 Repeat steps 4 to 6 to adjust other crosses. When finished, press MENU to exit the Setup Menu.

Notes on Adjusting the Convergence Manually

- For best results, stand about 3 to 5 feet back from the picture when adjusting the convergence. Begin with the crosses in the center area of the screen and, once those are adjusted, move to the crosses on the edges of the screen.
- You can make separate adjustments to each wide mode: Full/Normal, Zoom, Wide Zoom, and Memory Stick/1080i high-definition input. (These features share a common convergence mode.) The cross pattern looks different in each of these, but the adjustment procedure is the same. Press the WIDE MODE button on the remote to toggle through the wide mode screens.
- To optimize the conditions for convergence adjustment, in the Video Menu, set Mode to Pro or Movie and lower the Picture level settings (see page 72). You can reset the adjustments by pressing the RESET button on the remote control.

Using the Remote Control

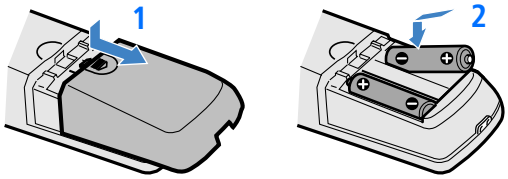
Overview

This chapter describes how to set up, program, and use the TV's remote control.

Topic	Page
Inserting Batteries	47
Button Descriptions	
Outside Panel	48
Inside Panel	50
Programming the Remote Control	51

Inserting Batteries

1. Remove the battery cover from the remote control.
2. Insert two size AA (R6) batteries (supplied) by matching the ⊕ and ⊖ terminals on the batteries to the diagram inside the battery compartment.
3. Replace the battery cover.



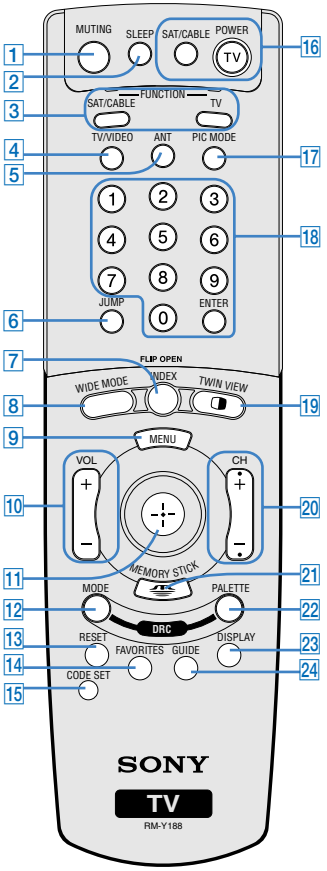
✍ **Remove the batteries to avoid damage from possible battery leakage whenever you anticipate that the remote control will not be used for an extended period.**

Handle the remote control with care.

Avoid dropping it, getting it wet, placing it in direct sunlight, near a heater, or where the humidity is high.

Button Descriptions

Outside Panel



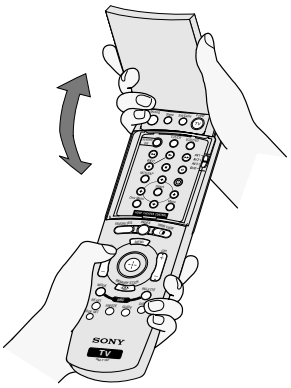
Button	Description
1 MUTING	Press to mute the sound. Press again or press VOL+ to restore the sound.
2 SLEEP	Press repeatedly until the TV displays the time in minutes (15, 30, 45, 60, or 90) that you want the TV to remain on before shutting off automatically. To cancel press until Sleep Off appears. While the Sleep feature is set, press once to display the remaining time.
3 FUNCTION Buttons	The indicator lights up momentarily when pressed to show which equipment the remote control is operating:
	SAT/CABLE: Press to have the remote control operate the satellite receiver or cable box.
	TV: Press to have the remote control operate the TV.
4 TV/VIDEO	Press repeatedly to cycle through the video equipment connected to the TV's video inputs.
5 ANT	Press to switch between the sources connected to the TV's VHF/UHF and AUX inputs.
6 JUMP	Press to jump back and forth between two channels. The TV alternates between the current channel and the last channel that was selected.
7 INDEX	Press to display the Scrolling Index. For details, see page 57.
8 WIDE MODE	Press repeatedly to step through the Wide Mode settings: Wide Zoom, Normal, Full, Zoom. Also available in the Screen menu. For details, see pages 58 and 76.
9 MENU	Press to display the Menu. Press again to exit from the Menu. For details, see page 71.
10 VOL +/-	Press to adjust the volume.
11 	Move the joystick ↑↓ ← → to move the on-screen cursor. To select an item, press the center of the joystick (⊕).
12 DRC MODE	Press repeatedly to cycle through the available high-resolution picture modes: Interlaced, Progressive, CineMotion. Also available in the Video Menu. For details, see "Selecting Video Options" on pages 72-73.
13 RESET	Press to reset the settings to the factory defaults. See pages 72 and 74. Also used to clear Favorite Channels (see page 62).
14 FAVORITES	Press to display the Favorite Channels list. For details, see page 62.

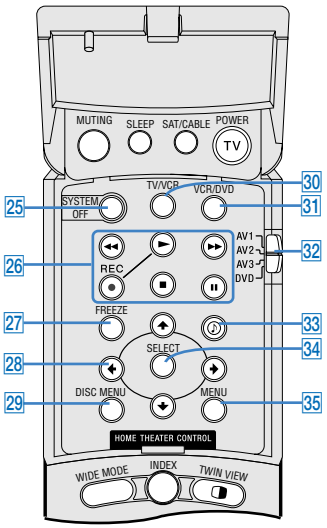
Button	Description
15 CODE SET	Press to program the remote control to operate non-Sony video equipment. For details, see “Programming the Remote Control” on page 51.
16 POWER Buttons	SAT/CABLE*: Press to turn on and off the satellite receiver or cable box.
	TV: Press to turn on and off the TV.
17 PIC MODE	Press repeatedly to cycle through the available video picture modes: Vivid, Standard, Movie, Pro. Also available in the Video Menu. For details, see “Selecting Video Options” on pages 72-73.
18 0 - 9 ENTER	Press 0 - 9 to select a channel; the channel changes after 3 seconds. Press ENTER to change channels immediately.
19 TWIN VIEW	Press to turn on and off Twin View. For details, see pages 59-61.
20 CH +/-	Press to scan through channels. To scan quickly through channels, press and hold down either CH button.
21 MEMORY STICK	Press to display the Memory Stick Menu. For details, see “Using the Memory Stick Picture Viewer” on page 64.
22 DRC PALETTE	Press repeatedly to cycle through the three Custom DRC Palette options. Also available in the Video Menu. For details, see “Selecting Video Options” on pages 72-73.
23 DISPLAY	Press once to display the current channel number, current time, and channel label (if set). Press again to turn Display off.
24 GUIDE*	Press to display the program guide of your satellite program provider.

* Requires that you first program the remote control (page 51), if not Sony brand.

Inside Panel

To access the inside panel, open the outside cover as shown.





Opening the outside cover automatically switches the remote control to operate your VCR or DVD player, depending on the position of the A/V slide switch. For details, see page 51.

VCR and DVD buttons require that you first program the remote (page 51), if the VCR and DVD player are not Sony brand.

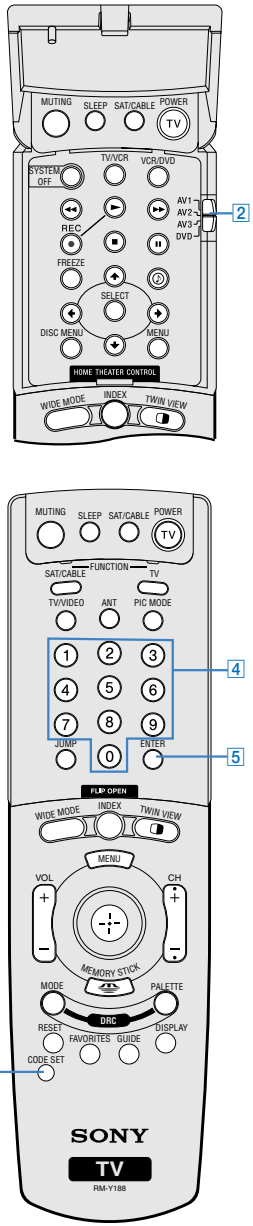
Button	Description
25 SYSTEM OFF	Press to turn off all Sony brand audio/video equipment at once. (May not function with older Sony equipment.)
26 Transport Buttons	◀◀ Rewind
	▶ Play
	● Record (press together with ▶)
	■ Stop
	▶▶ Fast forward
	❚❚ Pause
27 FREEZE	Press to freeze the picture. Press again to restore the picture. For details, see “Using the Freeze Function” on page 63.
28 ↑↓←→	Press ↑↓←→ to move the VCR or DVD player’s on-screen cursor.
29 DISC MENU	Press to display the DVD Menu.
30 TV/VCR	Press to change to the VHF/UHF output of the VCR.
31 VCR/DVD	Press to turn on and off the VCR or DVD player.
32 AV1/2/3/DVD Slide Switch	Use the A/V slide switch to control connected video equipment. You can program one video source for each switch position. For details, see “Programming the Remote Control” on page 51.
33 ♪	Press repeatedly to step through the Audio Effect options. Also available in the Audio Menu. For details, see page 74.
34 SELECT	Press to select an item in the VCR or DVD player’s menu.
35 MENU	Press to display the DVD player setup menu.

Programming the Remote Control

The remote control is preset to operate Sony brand video equipment.

Sony Equipment	*Switch Position on Remote Control*	*Programmable Code Number*
Beta, Ed Beta VCRs	AV1	303
8 mm VCR	AV2	302
VHS VCR	AV3	301
DVD player	DVD	751

If you have video equipment other than Sony brand that you want to control with the TV's remote control, use the following procedure to program the remote control.



The equipment must have infrared (IR) remote capability in order to be used with the remote control.

1. Turn to the list of "Manufacturer's Codes" on page 52, and find the three-digit code number for the manufacturer of your equipment. (If more than one code number is listed, use the number listed first.)
2. Open the remote control and set the A/V slide switch to 1, 2, 3, or DVD.
3. Press CODE SET.
4. Enter the three-digit manufacturer's code number.
5. Press ENTER.

You must do step 5 within 10 seconds of step 4, or you must redo steps 3 through 5.

6. To check if the code number works, aim the TV's remote control at the equipment and press the POWER button that corresponds with that equipment. If it responds, you are done. If not, try using another code listed for that manufacturer.

Notes

- If more than one code number is listed, try entering them one by one until you come to the correct code for your equipment.
- If you enter a new code number, the code number you previously entered at that setting is erased.
- In some cases, you may not be able to operate your equipment with the supplied remote control. In such cases, use the equipment's own remote control unit.
- Whenever you remove the batteries to replace them, the code numbers may revert to the factory setting and must be reset.

VCRs

Manufacturer	Code
Sony	301, 302, 303
Admiral (M. Ward)	327
Aiwa	338, 344
Audio Dynamic	314, 337
Broksonic	319, 317
Canon	309, 308
Citizen	332
Craig	302, 332
Criterion	315
Curtis Mathes	304, 338, 309
Daewoo	341, 312, 309
DBX	314, 336, 337
Dimensia	304
Emerson	319, 320, 316, 317, 318, 341
Fisher	330, 335
Funai	338
General Electric	329, 304, 309
Go Video	322, 339, 340
Goldstar	332
Hitachi	306, 304, 305, 338
Instant Replay	309, 308
JC Penney	309, 305, 304, 330, 314, 336, 337
JVC	314, 336, 337, 345, 346, 347
Kenwood	314, 336, 332, 337
LXI (Sears)	332, 305, 330, 335, 338
Magnavox	308, 309, 310
Marantz	314, 336, 337
Marta	332
Memorex	309, 335
Minolta	305, 304
Mitsubishi/ MGA	323, 324, 325, 326
Multitech	325, 338, 321
NEC	314, 336, 337
Olympic	309, 308
Optimus	327
Orion	317
Panasonic	308, 309, 306, 307
Pentax	305, 304
Philco	308, 309
Philips	308, 309, 310
Pioneer	308
Quasar	308, 309, 306
RCA/ PROSCAN	304, 305, 308, 309, 311, 312, 313, 310, 329
Realistic	309, 330, 328, 335, 324, 338
Sansui	314
Samsung	322, 313, 321
Sanyo	330, 335
Scott	312, 313, 321, 335, 323, 324, 325, 326
Sharp	327, 328
Signature 2000 (M. Ward)	338, 327
SV2000	338
Sylvania	308, 309, 338, 310
Symphonic	338
Tashiro	332
Tatung	314, 336, 337
Teac	314, 336, 338, 337
Technics	309, 308
Toshiba	312, 311
Wards	327, 328, 335, 331, 332
Yamaha	314, 330, 336, 337
Zenith	331

Laserdisc Players

Manufacturer	Code
Sony	701
Panasonic	704, 710
Pioneer	702

DVD Players

Manufacturer	Code
Sony	751
General Electric	755
Hitachi	758
JVC	756
Magnavox	757
Mitsubishi	761
Oritron	759
Panasonic	753
Philips	757
Pioneer	752
RCA/Proscan	755
Samsung	758
Toshiba	754
Zenith	760

Cable Boxes

Manufacturer	Code
Sony	230
Hamlin/Regal	222, 223, 224, 225, 226
Jerrold/G. I.	201, 202, 203, 204, 205, 206, 207, 208, 218
Oak	227, 228, 229
Panasonic	219, 220, 221
Pioneer	214, 215
Scientific Atlanta	209, 210, 211
Tocom	216, 217
Zenith	212, 213

Satellite Receivers

Manufacturer	Code
Sony	801
Dish Network	810
Echostar	810
General Electric	802
Hitachi	805
Hughes	804
Mitsubishi	809
Panasonic	803
RCA/ PROSCAN	802, 808
Toshiba	806, 807

Using Other Equipment with Your TV Remote Control

All Equipment

To Do This ...	Do This ...
Switch the TV's input to the VCR, DVD player, or other connected equipment	Press TV/VIDEO repeatedly to cycle through the video equipment connected to the TV's video inputs.
Set up the TV remote control to operate non-Sony equipment	You must program the remote control the first time you use it. See "Programming the Remote Control" on pages 51 to 52.

Operating a VCR

To Do This ...	Press
Activate the remote control to operate the VCR	Open the outside cover, as shown on page 50. The set the A/V slide switch to the position you programmed for the VCR.
Change channels	CH +/-
Record	► and ● simultaneously
Play	►
Stop	■
Fast forward	▶▶
Rewind the tape	◀◀
Pause	▮▮
Search the picture forward or backward	▶▶ or ◀◀ during playback (release to resume normal playback)
Change input mode	TV/VCR

Operating a Satellite Receiver

To Do This ...	Press
Activate the remote control to operate the satellite receiver	SAT/CABLE FUNCTION
Turn on/off	SAT/CABLE POWER
Select a channel	0-9, ENTER
Change channels	CH +/-
Back to previous channel	JUMP
Display channel number	DISPLAY
Display SAT Guide	GUIDE
Display SAT Menu	MENU
Move highlight (cursor)	Move the joystick ↑ ↓ ← →
Select item	⊕

Operating a Cable Box

To Do This ...	Press
Activate the remote control to operate the cable box	SAT/CABLE FUNCTION
Turn on/off	SAT/CABLE POWER
Select a channel	0-9, ENTER
Change channels	CH +/-
Back to previous channel	JUMP

Operating a DVD Player

To Do This ...	Press
Activate the remote control to operate the DVD	Open the outside cover, as shown on page 50. Then set the A/V slide switch to the position you programmed for the DVD player.
Play	►
Stop	■
Pause	❚❚
Step through different tracks of the disc	►► to step forward or ◄◄ to step backward
Step through different chapters of a video disc	CH+ to step forward or CH- to step backward
Display the DVD player Menu (Setup)	MENU (inside panel)
Display the DVD Menu	DISC MENU
Move highlight (cursor)	↑ ↓ ← →
Select item	SELECT

Operating an MDP (Laserdisc Player)

To Do This ...	Press
Activate the remote control to operate the MDP	Open the outside cover, as shown on page 50. Then set the A/V slide switch to the position you programmed for the MDP player.
Play	►
Stop	■
Pause	❚❚
Search the picture forward or backward	►► or ◄◄ during playback (release to resume normal playback)
Search a chapter forward or backward	CH +/-

Using the Features

Overview

This chapter describes how to use the features of your TV.

Topic	Page
Watching TV	56
Using the Scrolling Index	57
Using Wide Mode	58
Using Twin View	59
Using Favorite Channels	62
Using the Freeze Function	63
Using the Memory Stick Picture Viewer	64

Watching TV

For a complete list of all the functions of the remote control, see pages 47-52.

To Do This ...	Do This ...
Activate the remote control to operate the TV	Press TV FUNCTION
Turn on/off the TV	Press TV POWER
Tune directly to a channel	Press 0-9 and then ENTER (or wait 3 seconds) or Press CH+/-
Adjust the volume	Press VOL +/-
Mute the volume	Press MUTING (press again to unmute)
Alternate back and forth between two channels	Press JUMP The TV alternates between the current channel and the last channel tuned.
Display the current channel number (and other information)	Press DISPLAY once to display the channel number, current time, and channel label (if set). Press DISPLAY again to turn Display off.
Switch the TV's input to the VCR, DVD player, or other connected equipment	Press TV/VIDEO repeatedly to cycle through the video equipment connected to the TV's video inputs.
Change video and audio options, customize the TV's setup, set parental controls, and more	Press MENU to display the Menu. For details, see "Using the Menus" on page 71.
Switch the TV's input between sources connected to the TV's VHF/UHF and AUX inputs	Press ANT to alternate between sources connected to the TV's VHF/UHF and AUX inputs.

Using the Scrolling Index

The Scrolling Index lets you select programs from a scrolling index of video pictures.

1 Press INDEX.

The Scrolling Index appears, with the currently selected program in the main (left) window, and four scrolling video pictures in the right.



As each picture on the right scrolls to the live preview window, it changes briefly from a frozen video picture to a live video. The right side continues to scroll through the entire channel list.

2 To change the direction of the scrolling, move the joystick ↑ or ↓.

3 To change the speed of the scrolling, move and hold the joystick ↑ or ↓.

4 To change a frozen video picture to a live video, move the joystick ↑ or ↓ to highlight the picture, then press ⊕.

5 To move the live video (from step 4) from the right to the main (left) window of the Scrolling Index, press ⊕ again.

To exit the Scrolling Index

❑ Press INDEX.

Factors Affecting Scrolling Index

- ❑ Scrolling Index feature does not function if you use a cable box to view all channels.
- ❑ Sources connected to the AUX, VIDEO 5, VIDEO 6, and VIDEO 7 inputs display in the left window, but not the right windows.
- ❑ Scrolling Index does not function if parental controls are set (see page 80).

Using Wide Mode

Wide Screen mode lets you watch 4:3 normal broadcasts in several Wide Screen modes (16:9 aspect ratio).

When viewing high-definition programs broadcast in 720p/1080i, it is not possible to change between Wide Screen modes.

You can also access the Wide Mode settings in the Screen menu. For details, see page 76.

When you change channels or inputs, the Wide Mode settings revert to the 4:3 Default setting in the Screen menu. To retain the current Wide Mode setting as channels and inputs are changed, set 4:3 Default to Off. For details, see page 77.

❑ Press WIDE MODE repeatedly to toggle through the following Wide Mode settings.



Wide Zoom

Wide Zoom enlarges the 4:3 picture, while the upper and lower parts of the picture are condensed to fit the 16:9 screen.



Normal

Normal returns the 4:3 picture to its original size.



Full

Full Mode stretches the 4:3 picture horizontally only, to fill the 16:9 screen.



Zoom

Zoom Mode enlarges the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the 16:9 screen. Useful for watching Letterbox movies.

Using Twin View

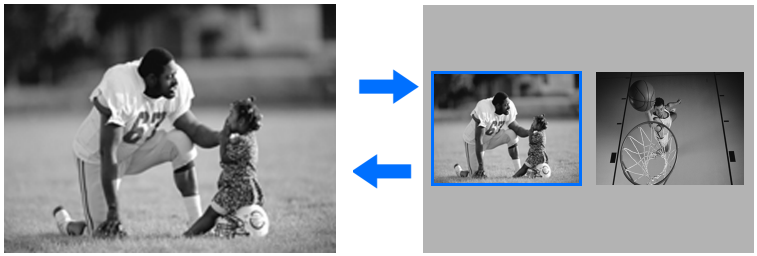
Twin View lets you see two pictures from two sources — from an antenna, VCR, DVD, etc. — on the screen at the same time. You hear the sound from only one of the sources at a time, but you can choose which source's sound is selected. You can also change the relative size of each of the pictures.

Displaying Twin Pictures

1 Tune the TV to a working channel.

2 Press ◑.

A second picture appears. The active picture is highlighted in blue.



To cancel Twin View and watch the active picture

❑ Press ◑ or ⊕.

Factors Affecting Twin View

- ❑ If you use a cable box to view all channels, the same channel appears in both windows because the cable box unscrambles only one channel at a time.
- ❑ If you use a cable box, you can view the cable box output in one window and view a different source (such as a VCR or DVD player) in the second window by using the TV/VIDEO button. For details, see "Connecting Optional Equipment" on page 25.
- ❑ Sources connected to the AUX, VIDEO 5, VIDEO 6, and VIDEO 7 inputs display in the left window, but not the right.
- ❑ If you are viewing a 4:3 source and a 16:9 enhanced source (such as a DVD) side by side, the 4:3 source appears larger.
- ❑ Twin View does not display channels that are blocked by parental settings (see page 80).

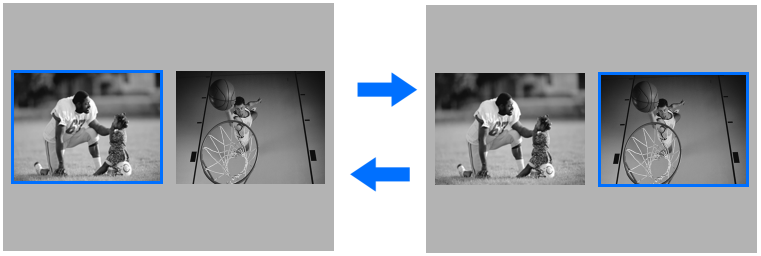
Activating the Picture

To activate the picture in the right window

❑ Move the joystick →.

To activate the picture in the left window

❑ Move the joystick ←.



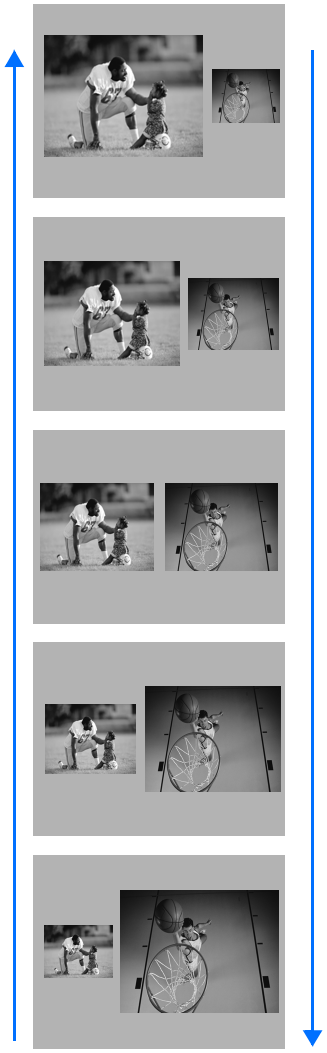
Functions Available in the Active (Highlighted) Window

To Do This ...	*Do This ...*
Tune to a channel	Press 0-9 and then ENTER (or wait 3 seconds) or Press CH+/-
Adjust the volume	Press VOL +/-
Mute the volume	Press MUTING (press again to unmute)
Switch the TV's input between sources connected to the TV's VHF/UHF and AUX inputs	Press ANT (left window only)
Switch the TV's input between sources connected to the TV's A/V inputs	Press TV/VIDEO
Change the picture size	Move the joystick ↑ or ↓. (For details, see "Changing the Picture Size" on page 61.)

Changing the Picture Size

The zoom feature lets you vary the relative size of the left and right pictures.

1. Move the joystick ← or → to activate the picture that you want to resize.
2. Move the joystick ↑ to enlarge the picture.
3. Move the joystick ↓ to make the picture smaller.



When you adjust the picture sizes, the TV memorizes the change. The next time you use the Twin View function, the memorized sizes appear.

Using Favorite Channels

The Favorite Channels feature lets you select programs from a list of up to eight favorite channels that you specify.

Creating a List of Favorite Channels

For details on using the Channel Menu, see page 78.

1. Press MENU to display the Menu.
2. Move the joystick ← or → to highlight the Channel icon and press ⊕.
3. Press ⊕ to select Favorite Channels.
4. Move the joystick ↑ or ↓ to highlight a Favorite Channel number (1-8) and press ⊕.
5. Move the joystick ↑ or ↓ to highlight a channel you want to assign to the Favorite Channel number. A preview of the highlighted channel appears in the upper right of the screen. Press ⊕ to select that channel as a Favorite Channel.
6. To add more channels to your favorites list, repeat steps 4-5.

   To clear a Favorite Channel, move the joystick ↑ or ↓ to highlight the channel you want to clear. Press ⊕ and then press RESET.
7. Press MENU to exit the Menu.

Displaying a List of Favorite Channels

To assign Channel Labels (e.g., ABC, HBO, MTV, etc.) to channel numbers, as shown at right, use the Channel Label feature in the Channel Menu (see page 79).

1. Press FAVORITES. The Favorite Channels list appears.



2. Move the joystick ↑ or ↓ to highlight the channel you want to watch.

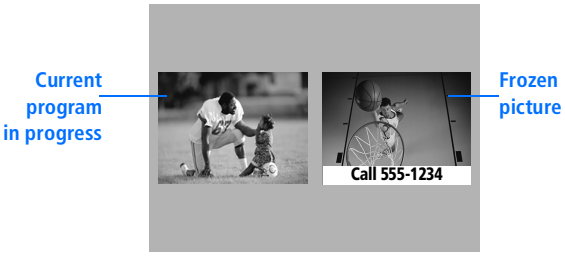
   A preview of the highlighted Favorite Channel appears.
3. Press ⊕ to select the channel you want to watch.

Using the Freeze Function

The FREEZE button allows you to temporarily capture a program's picture. You can use this feature to write down information such as phone numbers, recipes, etc.

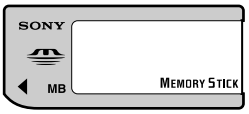
The Freeze feature is not available while you are using the Twin View or Scrolling Index features.

1. When the program information you want to capture is displayed, press FREEZE.
2. The TV switches to Twin View mode and displays the "frozen" picture on the right, while the current program continues on the left.



3. To cancel and return to normal viewing, press FREEZE (or just tune to another channel).

About Memory Stick



Memory Stick (sold separately) is a new, compact, portable, and versatile Integrated Circuit recording medium with a data capacity that exceeds that of a floppy disk. Memory Stick is specially designed for exchanging and sharing digital data among Memory Stick compatible products such as digital cameras and digital video cameras. Because it is removable, Memory Stick can also be used for external data storage.

✍ **You cannot write to Memory Stick media using the TV.**

Memory Stick technology allows you to view on your TV screen digital (jpeg) images that are stored on Memory Stick media. You can choose from an index of the images stored on the Memory Stick, or you can run a slideshow of those images. You can also customize the features of the slideshow by selecting the length of time that each image is displayed, toggling the display of file information, and rotating each image.

For more information about the using Memory Stick media, see “Notes on Using Memory Stick Media” on page 89.

Supported Image Types

This TV’s Memory Stick viewer can display only still images that have been recorded on Memory Stick media by Sony brand digital still and video cameras.

✍ **The TV’s Memory Stick viewer is compatible with Memory Sticks up to and including 128MB. It is not compatible with Memory Sticks that exceed 128MB.**

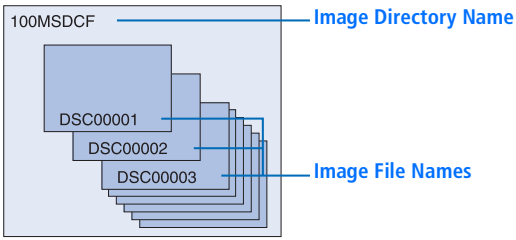
Recorded images must also meet the following specifications:

- Compression format: JPEG
- File name format: DCF compliant

✍ **JPEG stands for “Joint Photographic Experts Group,” which is the organization that implemented this format. DCF stands for “Design Rules for Camera File Systems,” which are specifications established by the Japan Electronic Industry Development Association (JEIDA).**

About DCF File Names

Most Sony brand digital still and video cameras automatically record still images using DCF compliant directory and file names, as shown in the following example:



✍ **Do not rename directories. If the names are changed, the still images cannot be displayed on your TV.**

Unsupported Image Types

This TV's Memory Stick viewer cannot display any of the following:

- Images recorded on digital still cameras and digital video cameras that are not Sony brand
- Images recorded using products that are not DCF compliant, including the following Sony products:

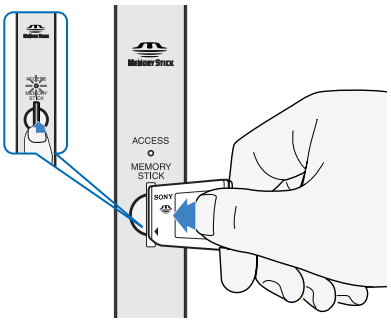
Digital still cameras	DSC-D700, DSC-D770
Digital video cameras	DCR-TRV900/DSR-PD100A

- Images stored on a Memory Stick that has a capacity that exceeds 128MB
- Images stored in TIFF or any other non-JPEG compression format
- Images in directories that were modified or renamed on a computer
- Images with less than 16 horizontal and/or vertical lines per dot
- Images with more than 4096 horizontal and/or vertical lines per dot
- Movie clips

Inserting and Removing a Memory Stick

To insert a Memory Stick

1 Locate the Memory Stick slot (see pages 14-15) and insert the Memory Stick into the Memory Stick slot as illustrated below. When inserted properly, it should slide in with little resistance and click into place.

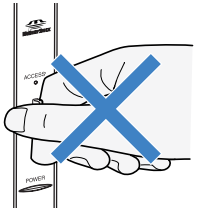


Be sure to insert the Memory Stick in the correct direction. If the Memory Stick is forced in the wrong way, it may become damaged.

Insert only Memory Stick media into the Memory Stick slot. Attempting to insert other objects into the slot may damage the TV.

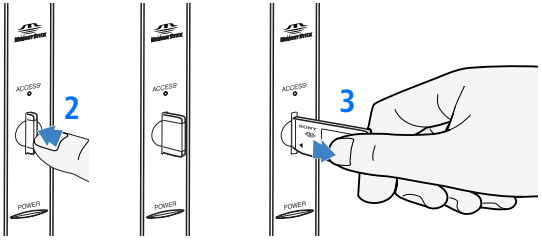
To remove a Memory Stick

When removing the Memory Stick, do not attempt to just pull it from its slot. Follow steps 1-3 (right).



1 Check that the Memory Stick indicator is off. (When the light is on, this indicates that the TV is reading data from the Memory Stick.)

2 Push the Memory Stick gently into the slot, and then release it. The Memory Stick media is ejected.



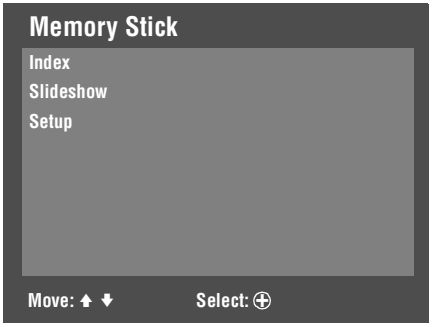
3 Pull the Memory Stick completely out of the slot.

To protect small children from injury from Memory Stick Media, remove all Memory Stick media from the TV's Memory Stick slot and store it in a safe location when it is not in use.

Displaying the Memory Stick Menu

1 Insert a Memory Stick that contains the images you want to view. For details, see page 66.

2 Press the MEMORY STICK button on the remote control. The Memory Stick Menu appears.



3 To select an option, move the joystick ↑ or ↓ to highlight the option and press ⊕.

Option	*Description*
Index	Displays an index of thumbnail images that are on the Memory Stick. For details, see "Using the Memory Stick Index" on page 68.
Slideshow	Displays a slideshow of images that are on the Memory Stick. For details, see "Using the Memory Stick Slideshow" on page 69.
Setup	Allows you to change slideshow options and rotate images. For details, see "Changing the Memory Stick Setup Options" on page 69.

4 To exit the Memory Stick Menu, press CH +/-, TV/VIDEO, ANT, or use the 0-9 buttons and ENTER (or wait 3 seconds) to select a channel.

✍ **Memory Stick functions are not available while using Twin View, Freeze or Favorite Channel functions.**

Using the Memory Stick Index

The Memory Stick Index lets you view images that are on the Memory Stick in an index of thumbnail images.

There is no audio signal available while viewing images on Memory Stick.

1 Insert a Memory Stick that contains the images you want to view. For details, see page 66.

2 Press the MEMORY STICK button on the remote control. The Memory Stick Menu appears.

3 Move the joystick to highlight Index and press ⊕. The Memory Stick Index appears.

The Page and folder (🗀) buttons are available only if the Memory Stick contains more images or folders than can be displayed on one screen.



The selected image is highlighted in yellow

Information about the selected image

4 Move the joystick ↑ ↓ ← → to highlight an image and press ⊕ to select the image. Selecting an image displays that image at full size. While an image is displayed full size, you can do any of the following:

To Do This ...	*Do This ...*
Display the previous image	Move the joystick ←.
Display the next image	Move the joystick →. If you move the joystick → while viewing the last image, the first image is displayed. If you move the joystick ← while viewing the first image, the last image is displayed.
Display the Memory Stick Index	Press ⊕.

Larger images will take longer to display on screen.

5 To return to the Memory Stick Menu, move the joystick to Menu and press ⊕.

If a blank square appears instead of a thumbnail image, this indicates that the image does not support a thumbnail view. Selecting the icon, however, displays the full-size image on the screen. It could also indicate that both the thumbnail and full-size images are corrupted or not supported.

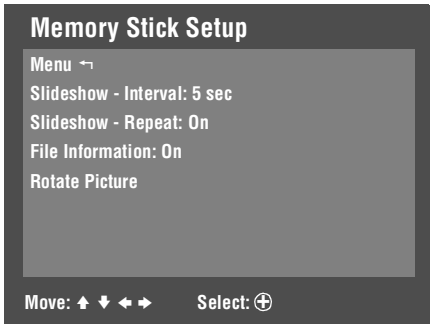
Using the Memory Stick Slideshow

The Memory Stick Slideshow lets you watch a slideshow of the images that are on the Memory Stick.

1. Insert a Memory Stick that contains the images you want to view. For details, see page 66.
2. Press the MEMORY STICK button on the remote control. The Memory Stick Menu appears.
3. Move the joystick to highlight Slideshow and press ⊕. The slideshow starts.
4. To end the slideshow, press ⊕. The Memory Stick Menu is displayed.

Changing the Memory Stick Setup Options

1. Press the MEMORY STICK button on the remote control. The Memory Stick Menu appears.
2. Move the joystick to highlight Setup and press ⊕. The Memory Stick Setup Menu appears.



3. Move the joystick to highlight an option and press ⊕.

Option	Description
Menu	Returns to the Memory Stick Menu.
Slideshow – Interval	Decrease or increase the length of time that each image is displayed: 5 seconds, 10 seconds, 1 minute, 5 minutes, or 15 minutes.
Slideshow – Repeat	Select On to set the slideshow to repeat after displaying all the images recorded on the Memory Stick. Select Off to not repeat the slideshow.
File Information	Select On to show file information of each image while that image is being displayed.
Rotate Picture	Displays the Rotate Picture screen. For details, see "Using the Rotate Picture Screen" on page 70.

4. Move the joystick → (or press ⊕) to change settings. Move the joystick ← (or press ⊕) to select the changed setting.
5. To exit the Memory Stick Setup Menu, move the joystick to Menu and press ⊕.

Using the Rotate Picture Screen

The Rotate Picture Screen lets you rotate an image from an index of thumbnails.

You cannot rotate images if the LOCK switch on the Memory Stick is on. To rotate the images, first set the LOCK switch to off.

1 In the Memory Stick Setup Menu, move the joystick to highlight Rotate Picture and press ⊕. The Rotate Picture screen appears.



The Page and folder (🗀) buttons are available only if the Memory Stick contains more images or folders than can be displayed on one screen.

2 Move the joystick ↑ ↓ ← → to highlight an image that you want to rotate.

3 Press ⊕ to rotate an image 90 degrees in a clockwise direction.

4 To return to the Memory Stick Setup Menu, move the joystick to highlight Menu ↩ and press ⊕.

If a blank square appears instead of the thumbnail image, this indicates that the image does not support a thumbnail view and cannot be rotated.

Using the Menus

Overview

The Menu gives you access to the following features:

Menu Icon	Description	Page
	Allows you to make adjustments to your picture settings. It also allows you to customize the Picture Mode based on the type of program you are viewing, select Advanced Video options, and more.	72
	Offers enhanced audio options such as listening to second audio programming (SAP) or customizing the Effect of the sound on your TV.	74
	Allows you to make Wide Mode adjustments and make changes to the screen's vertical center.	76
	Allows you to set up a Favorite Channel list, run the Auto Program function, skip and label channels, and more.	78
	Lets you control the viewing of programs based on their ratings.	80
	Provides options for setting up your system, including selecting closed caption modes, setting the Timer, labeling video inputs, selecting the language of the on-screen menus, and more.	83

Press MENU to enter and exit Menus.

Navigating Through Menus

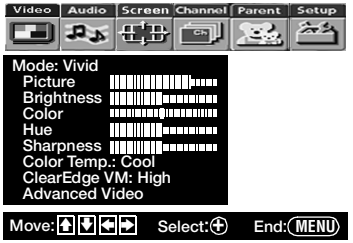
To Do This ...	Press
Display the Menu	MENU
Move through the Menus	← →
Move through the Menu options	↑ ↓
Select an option to change	⊕
Change an option's settings	↑ ↓ ← →
Select (confirm) changed setting	⊕ or ←
Exit the Menu	MENU

Menus include navigation help text that appears at the bottom of each Menu.

Using the Video Menu

To select the Video Menu

1. Press MENU.
2. Move the joystick ← or → to highlight the Video icon and press ⊕.
3. Move the joystick to highlight an option. Press ⊕ to select an option.
4. Move the joystick ↑ ↓ ← → to change settings. Press ⊕ to select the changed setting.
5. Press MENU to exit the Menu.



To restore the factory default settings for the Video settings (excluding Advanced Video) of the Mode (Vivid, Standard, etc.) the TV is set to:

❑ Press RESET on the remote control when in the Video Menu.

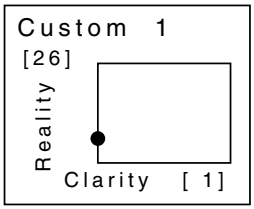
Selecting Video Options

To change from one Mode to another, use the PIC MODE button on the remote control.

You can alter the Video Menu settings (Picture, Brightness, Color, etc.) for each Mode.

The Video Menu includes the following options:

Option	Description	
Mode *Customized picture viewing*	Vivid	Select for enhanced picture contrast and sharpness.
	Standard	Select for standard picture settings.
	Movie	Select to display a softer picture.
	Pro	Select to display a picture with minimum enhancements.
Picture	Adjust to increase picture contrast and deepen the color, or decrease picture contrast and soften the color.	
Brightness	Adjust to brighten or darken the picture.	
Color	Adjust to increase or decrease color intensity.	
Hue	Adjust to increase or decrease the green tones.	
Sharpness	Adjust to sharpen or soften the picture.	
Color Temp. *White intensity adjustment*	Cool	Select to give the white colors a blue tint.
	Neutral	Select to give the white colors a neutral tint.
	Warm	Select to give the white colors a red tint (NTSC-Standard).

Option	Description
ClearEdge VM *Velocity Modulation*	Sharpens picture definition to give every object a sharp, clean edge. Select from High, Medium, Low, Off.
Advanced Video	Select Program to choose among the DRC Mode and DRC Palette options while viewing NTSC sources.
DRC Mode	Creates a high-resolution picture with 4x density, for high quality sources (i.e., DVD player, satellite receiver).
Interlaced	Recommended for moving pictures.
Progressive	Recommended for still images and text.
CineMotion	Provides an optimized display by automatically detecting film content and applying a reverse 3/2 pulldown process. Moving pictures will appear clearer and more natural-looking.
DRC Palette	Allows you to customize the level of detail (Reality) and smoothness (Clarity) for up to three input sources. For example, you can create one Custom setting to optimize your cable input's picture, and create another to optimize your DVD player's picture. You can switch among the three Custom settings using the DRC PALETTE button on the remote control. **1** Move the joystick to highlight Custom 1, Custom 2, or Custom 3 and then press ⊕. The DRC palette appears.  **2** Move the joystick to adjust the position of the marker (●). As you move the ● higher along the Reality axis, the picture becomes more detailed. As you move the ● to the right along the Clarity axis, the picture becomes smoother. **3** To save the setting, press ⊕. To return the Custom options to the default factory settings, press the RESET button.

To change quickly from one DRC Mode to another, use the DRC MODE button on the remote control.

Advanced Video options are not available (grayed out) when watching 480p, 720p, and 1080i sources.

To change quickly from one DRC Palette to another, use the DRC PALETTE button on the remote control.

For best results, adjust the Reality by moving the joystick ↑ ↓ until you are satisfied with the level of detail. Then adjust the Clarity by moving the joystick ← → until you have a smooth image.

Using the Audio Menu

To select the Audio Menu

1. Press MENU.
2. Move the joystick ← or → to highlight the Audio icon and press ⊕.
3. Move the joystick to highlight an option. Press ⊕ to select an option.
4. Move the joystick ↑ ↓ ← → to change settings. Press ⊕ to select the changed setting.
5. Press MENU to exit the Menu.



To restore the factory default settings for Treble, Bass, and Balance

❑ Press RESET on the remote control when in the Audio Menu.

Selecting Audio Options

The Audio Menu includes the following options:

Option		Description
Treble		Adjust to decrease or increase higher-pitched sounds.
Bass		Adjust to decrease or increase lower-pitched sounds.
Balance		Adjust to emphasize left or right speaker balance.
Steady Sound	Auto	Select to stabilize the volume.
	Off	Select to turn off Steady Sound.
Effect	TruSurround	Select for surround sound (for stereo programs only).
	Simulated	Adds a surround-like effect to mono programs.
	Off	Normal stereo or mono reception.
MTS *Enjoy stereo, bilingual and mono programs*	Stereo	Select for stereo reception when viewing a program broadcast in stereo.
	Auto SAP	Select to automatically switch the TV to second audio programs when a signal is received. (If no SAP signal is present, the TV remains in Stereo mode.)
	Mono	Select for mono reception. (Use to reduce noise during weak stereo broadcasts.)

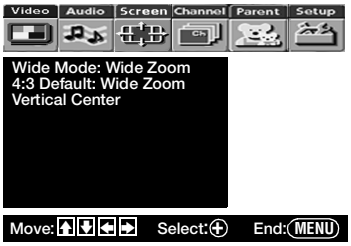
To change quickly from one Effect to another, use the ♪ button on the inside panel of the remote control.

Option	Description	
Speaker	On	Select to turn on the TV speakers.
	Off	Select to turn off the TV speakers and listen to the TV's sound only through your external audio system speakers.
Audio Out *Easy control of volume adjustments*	This option can be set only when the Speaker option is set to Off.	
	Variable	The TV's speakers are turned off, but the audio output from your audio system can still be controlled by the TV's remote control.
	Fixed	The TV's speakers are turned off and the audio output of the TV is fixed. Use your audio receiver's remote control to adjust the volume (and other audio settings) through your audio system.

Using the Screen Menu

To select the Screen Menu

1. Press MENU.
2. Move the joystick ← or → to move to the Screen icon and press ⊕.
3. Move the joystick ↑ or ↓ to move to an option. Press ⊕ to select an option.
4. Move the joystick ← → ↑ ↓ to change settings. Press ⊕ to select the changed setting.
5. Press MENU to exit the Menu.



Selecting Screen Mode Options

To change from one Wide Mode to another, use the WIDE MODE button on the remote control.

For Wide Zoom and Zoom modes, you can adjust the vertical position of the picture. For details, see page 77.

The Screen menu includes the following options:

Option	Description	
Wide Mode *Select a Wide Mode to use for 4:3 sources.*	Wide Zoom	Select to enlarge the 4:3 size picture, while the upper and lower parts of the picture are condensed to fit the wide screen.
	Normal	Select to return the 4:3 picture to normal mode.
	Full	Select to enlarge the 4:3 picture horizontally only, to fill the wide screen.
	Zoom	Select to enlarge the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the wide screen.

Wide Mode is unavailable while in Twin View, or when viewing HD (1080i, 720p) sources.

In some cases, wide-screen programs will be shown in aspect ratios that require the display of black bands at the top and bottom of your 16:9 screen. For more details, see page 92.

If 4:3 Default is set to anything but Off, the Wide Mode setting changes only for the current channel. When you change channels (or inputs), Wide Mode is automatically replaced with the 4:3 Default setting. To retain the current Wide Mode setting as channels and inputs are changed, set 4:3 Default to Off.

Option	*Description*	
4:3 Default *Select the default Screen Mode to use for 4:3 sources*	Wide Zoom	Select to enlarge the 4:3 size picture, while the upper and lower parts of the picture are condensed to fit the wide screen.
	Normal	Select to return the 4:3 picture to normal mode.
	Full	Select to enlarge the 4:3 picture horizontally only, to fill the wide screen.
	Zoom	Select to enlarge the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the wide screen.
	Off	Select to continue using the current Wide Mode setting when the channel or input is changed.
Vertical Center	Allows you to move the position of the picture up and down in the window. (Available only in Wide Zoom and Zoom modes.) Move the joystick ▲ or ▼ and press ⊕ to choose a correction between +15 and -15 (Zoom mode), and +10 and -10 (Wide Zoom mode).	

Using the Channel Menu

To select the Channel Menu

1. Press MENU.
2. Move the joystick ← or → to highlight the Channel icon and press ⊕.
3. Move the joystick to highlight an option. Press ⊕ to select an option.
4. Move the joystick ↑ ↓ ← → to change settings. Press ⊕ to select the changed setting.
5. Press MENU to exit the Menu.



Selecting Channel Options

The Channel Menu includes the following options:

Option	Description	
Favorite Channels	Lets you set up a list of your favorite channels. For details, see "Using Favorite Channels" on page 62.	
Cable	On	Select if you are receiving cable channels with a CATV cable.
	Off	Select if you are using an antenna.
	✍ **You should run Auto Program after changing this option.**	
Channel Fix *Useful when you have a cable box or satellite receiver connected*	Off	Turns off Channel Fix.
	2-6	"Fix" your TV's channel setting to 2-6 and use the cable box or satellite receiver to change channels. Select one of these settings if you connected the equipment to the VHF/UHF jack.
	AUX 2-6	Same as 2-6, except you select one of these settings if you connected the equipment to the AUX jack (see page 17).
	Video 1	Use this setting if you have connected the equipment to the A/V input jacks.
Auto Program	Automatically sets up the channel list on the TV for all receivable channels.	

Channels that you set to be skipped can be accessed only with the 0-9 buttons.

Channel Label is not available (grayed out) when watching 480p, 720p, and 1080i sources.

Option	Description
Channel Skip/Add	Allows you to customize the channel list that appears when you use the CH+/- buttons. 1 Move the joystick ↑ or ↓ to scroll through the channels until you find the channel you want to skip or add. Then press ⊕ to select it. 2 Move the joystick ↑ or ↓ to toggle between Add or Skip. Then press ⊕ to select. 3 To add or skip more channels, repeat steps 1 and 2. 4 Move the joystick ← to return to the Channel Menu, or press MENU to exit the Menus.
Channel Label	Allows you to assign labels (such as station call letters) to channel numbers. You can label up to 20 channels. 1 Move the joystick to highlight Channel and press ⊕. 2 Move the joystick ↑ ↓ to scroll through the channel numbers (1-125). Then press ⊕ to select the channel number that you want to assign a label. 3 Move the joystick to highlight Label and press ⊕. 4 Move the joystick ↑ ↓ to scroll through the label characters (A-Z, 0-9, etc.). Then press ⊕ to select the highlighted character. 5 Repeat to add up to 5 characters to the label. 6 To assign labels to more channels, repeat steps 1-4. 7 Move the joystick ← to return to the Channel Menu, or press MENU to exit the Menus.

Using the Parent Menu

The Parent Menu allows you to set up the TV to block programs according to their content and rating levels.



To select the Parent Menu

1. Press MENU.
2. Move the joystick ← or → to highlight the Parent icon and press ⊕.
3. Use the 0-9 buttons on the remote control to enter a four-digit password.
4. If this is the first time you are creating this password, confirm the password by entering it again. (The Parent Menu options appear.)
5. Move the joystick ↑ ↓ ← → to change settings. Press ⊕ to select the changed setting.
6. Press MENU to exit the Menu.

✍ **You need your password for any future access into the Parent Menu. If you lose your password, see "Lost password" on page 94.**

Selecting Parent Options

If you are not familiar with the Parental Guideline rating system, you should select Child, Youth, or Young Adult to help simplify the rating selection. To set more specific ratings, select Custom.

For descriptions of Child, Youth, and Young Adult ratings, see page 81.

The Parent Menu includes the following options:

Option	Description	
Parental Lock *Turn ratings on/off and select a rating system*	Off	Parental lock is off. No programs are blocked from viewing.
	Child	Maximum ratings permitted are: ❑ US: TV-Y, TV-G, G ❑ Canada: C, G, TV-Y
	Youth	Maximum ratings permitted are: ❑ US: TV-PG, PG ❑ Canada: C8+, PG, 8 ans+, TV-PG
	Y. Adult	Maximum ratings permitted are: ❑ US: TV-14, PG-13 ❑ Canada: 14+, 13 ans+, TV-14
	Custom	Select to set ratings manually. ❑ US: See page 81 for details. ❑ Canada: See page 82 for details.
Change Password	For changing your password.	
Select Country	U.S.A.	Select to use USA ratings (see page 81).
	Canada	Select to use Canadian ratings (see page 82).

US Models: Selecting Custom Rating Options

For US models, the Custom Rating Menu includes the following options. (For Canadian models, see page 82.)

Option	Description	
Movie Rating	G	All children and General Audience.
	PG	Parental Guidance suggested.
	PG-13	Parental Guidance for children under 13.
	R	Restricted viewing, parental guidance is suggested for children under 17.
	NC-17 and X	No one 17 or under allowed.
TV Rating *Block programs by their rating, content or both*	Age-Based Ratings	
	TV-Y	All children.
	TV-Y7	Directed to children age 7 and older.
	TV-G	General Audience.
	TV-PG	Parental Guidance suggested.
	TV-14	Parents Strongly cautioned.
	TV-MA	Mature Audience only.
	Content-Based Ratings	
	FV	Fantasy Violence.
	D	Suggestive Dialogue.
	L	Strong Language.
	S	Sexual situations.
	V	Violence.
Unrated *Block programs or movies that are broadcast without a rating*	Block	Blocks all programs and movies that are broadcast without a rating.
	Allow	Allows programs and movies that are broadcast without a rating.

The Content-Based Ratings are linked to the level of the Age-Based Rating. For example, a program with an Age-Based Rating of TV-PG V (Violence) rating may contain moderate violence, while a TV-14 V (Violence) rating may contain more intense violence.

To ensure maximum blocking capability, set the Age-Based Ratings.

If you block unrated TV programs, be aware that the following types of programs may be blocked: programs broadcast from another country, emergency broadcasts, political programs, sports, news, public service announcements, religious programs and weather.

Viewing Blocked Programs

You can view blocked programs by entering the password. Press the ENTER button when tuned to a blocked program, then enter the password. This temporarily switches off the Parental Lock. To reactivate the Parental Lock settings, turn off the TV. When the TV is turned on again, your Parental Lock settings are reactivated.

Canadian Models: Selecting Custom Rating Options

For Canadian models, the Custom Rating Menu includes the following options. (For US models, see page 81.)

Option	Description	
English Rating	C	All children.
	C8+	Children 8 years and older.
	G	General programming.
	PG	Parental Guidance.
	14+	Viewers 14 and older.
	18+	Adult programming.
French Rating	G	General programming.
	8 ans+	Not recommended for young children.
	13 ans+	Not recommended for ages under 13.
	16 ans+	Not recommended for ages under 16.
	18 ans+	Programming restricted to adults.
U.S.A. Rating	See "US Models" on page 81 for details.	

Viewing Blocked Programs

You can view blocked programs by entering the password. Press the ENTER button when tuned to a blocked program, then enter the password. This temporarily switches off the Parental Lock. To reactivate the Parental Lock settings, turn off the TV. When the TV is turned on again, your Parental Lock settings are reactivated.

Using the Setup Menu

To select the Setup Menu

1. Press MENU.
2. Move the joystick ← or → to highlight the Setup icon and press ⊕.
3. Move the joystick to highlight an option. Press ⊕ to select an option.
4. Move the joystick ↑ ↓ ← → to change settings. Press ⊕ to select the changed setting.
5. Press MENU to exit the Menu.



To move from within one Menu to the main Menu of icons, move the joystick ←.

Selecting Setup Options

The Setup Menu includes the following options:

Option	Description	
Caption Vision	Allows you to select from three closed caption modes (for programs that are broadcast with closed caption).	
	CC1, CC2, CC3, CC4	Displays a printed version of the dialog or sound effects of a program. (Should be set to CC1 for most programs.)
	Text1, Text2, Text3, Text4	Displays network/station information presented using either half or the whole screen (if available). For closed captioning, set to CC1.
	Info	Displays the program name and the time remaining in the program (if the broadcaster offers this service). Displays when the channel is changed or the DISPLAY button is pressed.
	Off	Turns off Caption Vision.

Option	Description
Video Label	Allows you to identify A/V equipment you connected to the TV, such as a VCR, DVD, etc. For example, if you have a DVD player connected to the VIDEO 5 jack, you can select the label DVD for the VIDEO 5 input. Then when you press the TV/VIDEO button to change inputs, the Video Label you assigned to that input appears on screen. **1** Move the joystick ↑ or ↓ to highlight the video input (VIDEO 1-7) to which you want to assign a label. Then press ⊕ to select the input. **2** Move the joystick ↑ or ↓ to highlight one of the displayed labels. Then press ⊕ to select the label. You can select from the following labels for each input: Video 1/2/3/4 — VHS, DVD, Receiver, Satellite, Cable Box, 8mm, DTV, Game, LD, Web, Beta, Skip Video 5/6/7 — DVD, Satellite, Cable Box, DTV, HD, Skip ✍ **If you select Skip, your TV skips this input when you press the TV/VIDEO button.**
Language	Select to display all on-screen Menus in your language of choice.
Clock/Timers	Select to set the clock and to program your TV to turn on and off at two scheduled viewing times. Timer 1 / Timer 2 — You can use the Timers to program the TV to turn on and off and tune to a specific channel at two scheduled viewing times. Timer 1 and Timer 2 are not available to be set until you set the Current Time. **1** Move the joystick ↑ or ↓ to highlight Timer 1 or Timer 2. To set the timer, move the joystick →. **2** Move the joystick ↑ or ↓ to highlight one of the following options, then press ⊕. Program — Select to set the Timer by day, time, duration, and channel. Off — Select to turn off the Timer. (Your previous settings are saved.) **3** If you selected Program in step 2, move the joystick ↑ and ↓ to set the day(s), hour, minute, duration, and channel number. Press ⊕ or move the joystick → to confirm each setting and move to the next setting. Move the joystick ← to go back to the previous setting. **4** Press MENU to exit the Menu. An LED on the front panel will light, indicating the timer has been set.

The Skip label is useful for inputs that do not have equipment connected to them.

To go directly to programming Timer 1 or 2, press ⊕ instead of moving the joystick →.

You can also access Flash Focus by pressing the FLASH FOCUS button on the front panel of the TV. For details, see pages 14-15.

Option	Description
Clock/Timers (continued)	Current Time 1 Press ⊕ to select Current Time. 2 Move the joystick ↑ and ↓ to set the current time (day, hour, and minute). Press ⊕ (or move the joystick →) to confirm each setting and move to the next setting. Move the joystick ← to go back to the previous setting. 3 Press MENU to exit the Menu.
Flash Focus	Allows you to adjust the convergence automatically. For details, see page 44.
Convergence	Allows you to fine-tune the convergence manually. For details, see page 45.
Demo	Runs a demonstration of on-screen Menus.

Other Information

Overview

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Glossary

analog signal
A signaling method that uses continuous changes in the amplitude or frequency of an electronic transmission to convey information.

aspect ratio
Refers to the ratio between the width and height of the screen. This TV has a 16:9 (widescreen) aspect ratio, as opposed to a 4:3 aspect ratio.

4:3 aspect ratio



16:9 aspect ratio



component video



Component video is sent through three cables: two color shade (chrominance) signals and one brightness (luminance) signal. Component video achieves greater color accuracy than composite video or S VIDEO by splitting chrominance into two separate portions.

composite video



Composite video is sent through a single cable. Composite video combines the color shade (chrominance) and brightness (luminance) information into one video signal.

digital television (DTV)
A new technology for transmitting and receiving broadcast television signals. DTV provides higher resolution and improved sound quality over analog television.

National Television System Committee (NTSC)
A unit of the Federal Communications Commission, Washington, DC, that establishes television standards in the United States, such as NTSC Color, the standard used in this TV.

RF
Radio Frequency. That part of the frequency spectrum in which it is possible to radiate (transmit) electromagnetic waves.

S VIDEO



S VIDEO requires a single cable, which carries the brightness (luminance) and color (chrominance) signals of the picture separately. S VIDEO provides better resolution than composite video, which carries the signals together.

VHF/UHF
VHF (Very High Frequency) is the part of the radio spectrum from 30 to 300 megahertz. UHF (Ultra High Frequency) is the part of the radio spectrum from 300 to 3,000 megahertz.

480i
Provides 480 lines of resolution. Displays images using interlaced scanning, which first transmits all the odd lines on the TV screen and then the even lines.

480p
Provides 480 lines of resolution. Displays images using progressive scanning, which transmits each line from top to bottom.

720p
Provides 720 lines of resolution. Displays images using progressive scanning, which transmits each line from top to bottom.

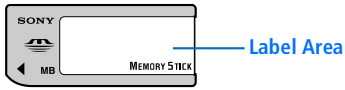
1080i
Provides 1080 lines of resolution. Displays images using interlaced scanning, which first transmits all the odd lines on the TV screen and then the even lines. 1080i is one of the formats used by HDTV (High Definition TV).

Notes on Using Memory Stick Media

Memory Stick Precautions

When using Memory Stick media, follow these precautions:

- To avoid permanent damage to still image data, do not turn off the TV or remove Memory Stick media from the insertion slot while data is being read (as indicated by the Memory Stick indicator light being on).
- Avoid touching the terminal of Memory Stick media or bringing it into contact with a metal object.
- Do not drop, bend, or submit Memory Stick media to external shock.
- Do not disassemble or modify Memory Stick media.
- Avoid getting liquid on Memory Stick media.
- Apply labels only within the designated label area.



- To avoid permanent damage to still image data, do not use or store Memory Stick media in a location subject to:
  - High temperature (such as near a heater or inside a hot car)
  - High humidity
  - Direct sunlight
  - Corrosive substances
  - Magnetic fields
  - Excessive dust
  - Static electricity or electric noise
- Store and carry Memory Stick media in its original case to ensure protection of stored data.
- Save a backup of stored data.

Contacting Sony

If, after reading these operating instructions, you have additional questions related to the use of your Sony television, please call our Customer Information Services Center at 1-800-222-SONY (7669) (US residents only) or (416) 499-SONY (7669) (Canadian residents only).

Troubleshooting

If you are having problems with your TV, you can reset all the TV's settings to their original factory default settings, as follows.

Notice: The following procedure resets all custom settings, channel lists, etc., to the factory default settings.

1. Turn on the TV.
2. Hold down the RESET button on the remote control.
3. Press the POWER button on the front panel of the TV.
4. Release the RESET button on the remote control.

Twin View

Problem	Possible Remedies
I cannot get Twin View to work	❑ If you are using a cable box to unscramble all channels (as shown on page 24), you cannot use the Twin View feature. This is because the cable box can unscramble only one channel at a time. But if you need the cable box to unscramble only some (usually premium) channels, you can use Twin View for unscrambled channels if you connect both a cable and cable box, as shown on page 22. ❑ You can use Twin View to view a signal from a different source that is connected to the TV's A/V jacks (such as a VCR or DVD player) in the second window by pressing the TV/VIDEO button while in Twin View. ❑ Sources connected to the AUX, VIDEO 5, VIDEO 6, and VIDEO 7 inputs display in the left Twin View window, but not the right.
There is no Twin View window, or it is just static	❑ Be sure the Twin View window is set to a video input or channel that has a signal airing. ❑ You might be tuned to a video input with nothing connected to it. Try cycling through the video inputs by pressing the TV/VIDEO button. ❑ If you connected equipment to the TV's AUX jack, it will display in the left Twin View window, but not the right.
Twin View cannot display anything but TV channels	❑ Try cycling through the video inputs by pressing the TV/VIDEO button. Check that the Video Label option is not set to Skip. (See the Setup Menu on page 84.)
Twin View displays the same program in both windows	❑ Both Twin View windows might be set to the same channel. Try changing channels in either window.

Remote Control

Problem	Possible Remedies
Remote control does not operate	❏ The batteries could be weak. Replace the batteries. ❏ Check the orientation of the batteries. ❏ Press the TV FUNCTION button. You may have inadvertently pressed the SAT/CABLE FUNCTION button, which changes the remote control to SAT or CABLE mode. ❏ Make sure the TV's power cord is connected securely to the wall outlet. ❏ Locate the TV at least 3-4 feet away from fluorescent lights.
Cannot change channels with the remote control	❏ If you are using the TV to change channels, first press the TV FUNCTION button. ❏ If you are using another device to change channels, be sure you have not inadvertently switched your TV from the channel 3 or 4 setting. Use the Channel Fix option to "fix" the channel based on the hookup you used (see page 78). ❏ If you are using another device to change channels, be sure to press the FUNCTION button for that device. For example, if you are using your cable box to change channels, be sure to press the SAT/CABLE FUNCTION button.
Remote control does not operate non-Sony video equipment	❏ If you replaced the batteries to the remote recently, the code numbers for the video equipment may need to be reset. ❏ There may be more than one code for the equipment that you are attempting to operate. ❏ There is a possibility that some non-Sony equipment cannot be operated by your Sony TV remote.You may need to use the equipment's original remote control.

Memory Stick

Problem	Possible Remedies
Image does not display	❏ Make sure the image is supported by the TV (see pages 64-65). ❏ Make sure the Memory Stick is inserted properly (see page 66). ❏ Memory Stick functions are not available while using Twin View, Freeze or Favorite Channel functions.
Blank square appears instead of a thumbnail image	❏ This indicates that the image does not support a thumbnail view. Selecting the icon, however, displays the full-size image on the screen. It could also indicate that both the thumbnail and full-size images are corrupted or not supported.
Cannot rotate image, no thumbnail appears	❏ Be sure the LOCK switch on the Memory Stick is set to off. ❏ If a blank square appears instead of the thumbnail image, this indicates that the image does not support a thumbnail view and cannot be rotated.
Cannot hear audio while using Memory Stick	❏ There is no audio available while using Memory Stick.
Image file name does not appear; instead, dashes (---) appear	❏ Dashes appear instead of the file name if the image was recorded using equipment that is not DCF-compliant. Dashes also appear if a DCF-compliant file was renamed.

Video

Problem	Possible Remedies
No picture (screen not lit), no sound	❑ If your TV does not turn on, and a red light keeps flashing, your TV may need service. Call your local Sony Service Center. ❑ Make sure the power cord is plugged in. ❑ Press the POWER button on the front of the TV. ❑ Press the TV/VIDEO button to cycle through the connected video sources. ❑ Try another channel; it could be station trouble.
Dark, poor or no picture (screen lit), good sound	❑ Adjust the Picture option in the Video Menu (see page 72). ❑ Adjust the Brightness option in the Video Menu (see page 72). ❑ Check the antenna/cable connections.
No color	❑ Adjust the Color option in the Video Menu (see page 72).
Only snow and noise appear on the screen	❑ Check the antenna/cable connections. ❑ Try another channel; it could be station trouble. ❑ Press ANT to change the input mode (see page 48).
Dotted lines or stripes	❑ Adjust the antenna. ❑ Move the TV away from noise sources such as cars, neon signs, or hair-dryers.
Double images or ghosts	❑ Using a highly directional outdoor antenna or a cable may solve the problem.
"Black box" on screen	❑ You have selected a text option in the Setup Menu and no text is available. (See page 83 to reset Setup selections.) To turn off this feature, set the Caption Vision option to Off. If you were trying to select closed captioning, select CC1 instead of TEXT 1-4.
Black bands appear at the top and bottom of the screen	❑ Some wide-screen programs are filmed in aspect ratios that are greater than 16:9 (this is especially common with theatrical releases). Your TV will show these programs with black bands at the top and bottom of the screen. For more details, check the documentation that came with your DVD (or contact your program provider).
Certain programs on DVD or other digital sources display a loss of detail, especially during fast-motion or dark scenes	❑ The compression used by certain digital broadcasts and DVDs may cause your TV's screen to display less detail than usual, or cause artifacts (small blocks or dots, pixelations) to appear on your screen. This is due to your TV's large screen and ability to show very fine detail, and is normal for certain digitally recorded programs. Adjust the reality/clarity in the DRC Palette menu (see page 73) to optimize the picture while viewing these sources.

Audio

Problem	Possible Remedies
Good picture, no sound	❑ Press MUTING so that Muting disappears from the screen (see page 48). ❑ Make sure the Speaker option is set to On in the Audio Menu (see page 75).
Cannot gain enough volume when using a cable box	❑ Increase the volume of the cable box using the cable box's remote control. Then press TV FUNCTION and adjust the TV's volume.
Sound seems weak or insufficient	❑ The TV's audio might be set to Auto SAP or Mono, when it might be better set to Stereo. In the Audio Menu (see page 74), set the MTS setting to Stereo. If already set to Stereo, switch to Mono (which may reduce background noise during weak stereo broadcasts).
Cannot raise the volume on external audio speakers	❑ If the Speaker option is set to Off and the Audio Out option is set to Fixed (in order to output the sound to your audio system) use your audio receiver to adjust the sound (see page 74). Or, to use the TV remote control, set the Audio Out option to Variable. ❑ To turn on the TV speakers, set the Speaker option to On (see page 74).

Channels

Problem	Possible Remedies
Cannot receive upper channels (UHF) when using an antenna	❑ Change the Cable option to Off (see page 78). ❑ Use Auto Program in the Channel Menu to add receivable channels that are not presently in the TV's memory (see page 78).
TV is fixed to one channel	❑ Use Auto Program in the Channel Menu to add receivable channels that are not presently in the TV's memory (see page 78). ❑ Check your Channel Fix settings (see page 78).
Cannot receive any channels when using cable TV	❑ Use Auto Program in the Channel Menu to add receivable channels that are not presently in the TV's memory (see page 78). ❑ Make sure the Cable option is set to On in the Channel Menu (see page 78).
Cannot receive or select channels	❑ Use Auto Program in the Channel Menu to add receivable TV channels that are not presently in TV memory (see page 78).

General

Problem	Possible Remedies
How to reset TV to factory settings	❏ Turn on the TV. While holding down the RESET button on the remote control, press the POWER button on the TV. (The TV will turn itself off, then back on again.) Release the RESET button.
How to restore Video settings to factory settings	❏ Press the RESET button on the remote control while in the Video Menu (see page 72).
How to restore Audio settings to factory settings	❏ Press the RESET button on the remote control while in the Audio Menu (see page 74).
Cannot cycle through the other video equipment connected to the TV	❏ Be sure the Video Label option is not set to Skip (see page 84).
Cannot operate Menu	❏ If a menu option appears in gray, this indicates that the TV is in a state in which the menu option is not available.
Lost password	❏ In the password screen (see page 80), enter the following master password: 4357. The master password clears your previous password; it cannot be used to temporarily unblock channels.
LED on front panel is lit	❏ The STAND BY LED (see page 14) blinks when the TV is turned on, then shuts off when the picture is displayed. If the LED blinks continuously, this may indicate the TV needs service. ❏ The TIMER LED (see page 14) indicates that the timer is set. When the timer is set, this LED will remain lit even when the TV is turned off.

Specifications

Projection System	3 picture tubes, 3 lenses, horizontal in-line system	
Picture Tube	7-inch high-brightness monochrome tubes (6.3 raster size), with optical coupling and liquid cooling system	
Projection Lenses	High performance, large diameter hybrid lens F1.1	
Antenna	75 ohm external terminal for VHF/UHF	
Television System	NTSC, American TV Standard	
Channel Coverage	VHF	2-13
	UHF	14-69
	CATV	1-125
Power Requirements	120V, 60 Hz	
Inputs/Outputs		
DVI-HDTV	1 terminal, 3.3V T.M.D.S., 50 ohms The DVI-HDTV input terminal is compliant with the EIA-861 standard and is not intended for use with personal computers.	
Video (IN)	4 total (1 on front panel)	1 Vp-p, 75 ohms unbalanced, sync negative
S Video (IN)	3 total (1 on front panel)	Y: 1 Vp-p, 75 ohms unbalanced, sync negative C: 0.286 Vp-p (Burst signal), 75 ohms
Audio (IN)	7 total (1 on front panel)	500 mVrms (100% modulation) Impedance: 47 kilohm
Component Video Input	2 (Y, P_B, P_R)	Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative; P_B: 0.7 Vp-p, 75 ohms P_R: 0.7 Vp-p, 75 ohms
CONTROL S (IN/OUT)	1	
Variable/Fixed Audio (OUT)	1	More than 408 mVrms at the maximum volume setting (Variable) More than 408 mVrms (Fixed) Impedance (output): 2 kilohms
Supplied Accessories	Remote Control	RM-Y188
	AA (R6) Batteries	2 supplied for remote control
Screen Size (measured diagonally)	KP-57WV600/700	57 inches
	KP-65WV600/700	65 inches
Speaker Output	20W x 2	
Dimensions (W x H x D)	KP-57WV600/700	1361 x 1394 x 689 mm (53 5/8 x 54 15/16 x 27 1/8 in)
	KP-65WV600/700	1542 x 1516 x 735 mm (60 3/4 x 59 3/4 x 28 15/16 in)
Mass	KP-57WV600/700	98Kg (216 lbs)
	KP-65WV600	136Kg (300 lbs)
	KP-65WV700	134Kg (295 lbs)
Power Consumption	In Use	295 W
	In Standby	Under 1 W

Design and specifications are subject to change without notice.

Optional Accessories

- A/V Cable (VMC-810/820/830 HG)
- Audio Cable (RKC-515HG)
- Component Video Cable (VMC-10/30 HG)
- Control S Cable (RK-G69HG)
- Memory Stick media: 8 MB (MSA-8A); 16 MB (MSA-16A); 32 MB (MSA-32A); 64 MB (MSA-64A); 128 MB (MSA-128A)

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SERVICE MANUAL

DA-4X CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-57WV600	*RM-Y188*	*US/CND*	*SCC-P92D-A*
KP-57WV700	*RM-Y188*	*US/CND*	*SCC-P92B-A*
KP-65WV600	*RM-Y188*	*US/CND*	*SCC-P92C-A*
KP-65WV700	*RM-Y188*	*US/CND*	*SCC-P92A-A*

CORRECTION- 1

SUBJECT: EXPLODED VIEW COVER DIAGRAMS

Correct the service manual as shown.
File this Correction with the service manual.

☛ : Corrected Item

Section 6: Exploded View

6-1. COVER (KP-57WV600/57WV700 ONLY) (Page 107)
6-2. COVER (KP-65WV600/65WV700 ONLY) (Page 108)

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SECTION 6: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

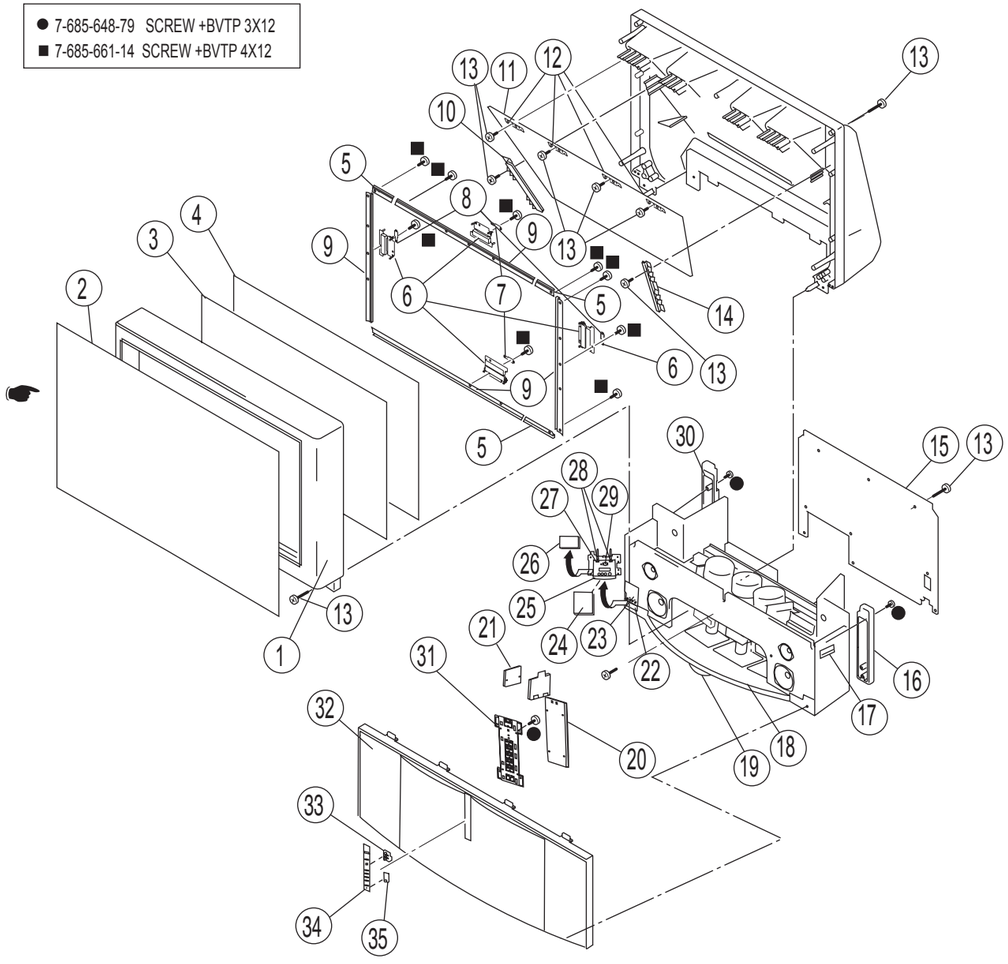
The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-1. COVER (KP-57WV600/57WV700 0NLY)



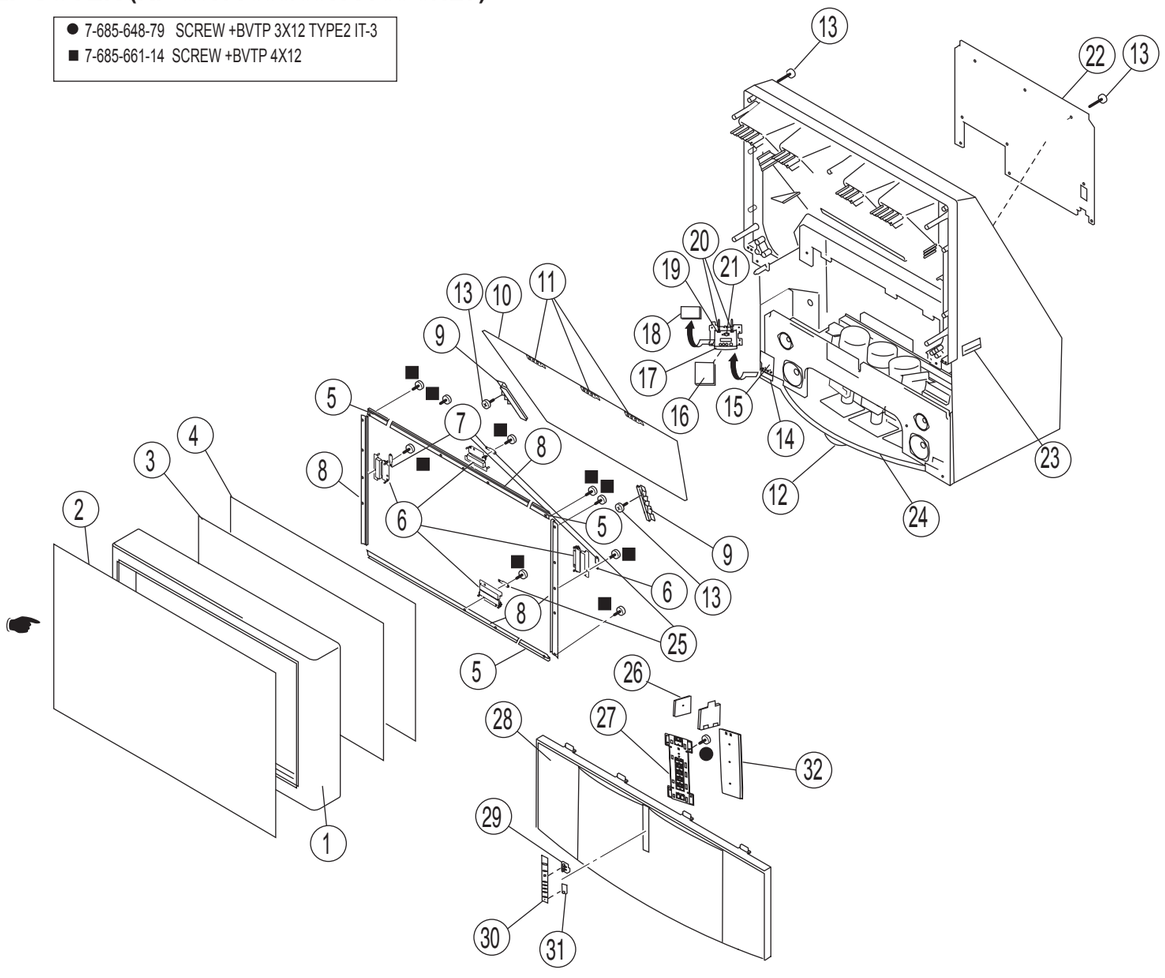
REF.NO.		PART NO.	DESCRIPTION
1		X-4040-450-1	BEZNET ASSY KP-57WV600 ONLY
1		X-4040-448-1	BEZNET ASSY KP-57WV700 ONLY
2		A-1603-725-A	CONTRAST SCREEN ASSY KP-57WV600 ONLY
2		A-1603-723-A	CONTRAST SCREEN ASSY KP-57WV700 ONLY
3		4-088-638-11	PLATE, DIFFUSION (WL) KP-57WV600 ONLY
3		4-088-611-11	PLATE, DIFFUSION (WL) KP-57WV700 ONLY
4		4-088-637-11	PLATE, DIFFUSION (WF) KP-57WV600 ONLY
4		4-088-610-11	PLATE, DIFFUSION (WF) KP-57WV700 ONLY
5	*	4-089-180-01	HOLDER, SCREEN SHORT
6	*	A-1400-759-A	SR MOUNT
7		4-088-460-21	CUSHION, SCREEN
8		4-088-460-31	CUSHION, SCREEN
9	*	4-088-461-01	HOLDER, SCREEN
10	*	4-088-600-01	HOLDER (L), MIRROR
11		4-088-598-01	MIRROR
12	*	4-081-501-01	HOLDER, MIRROR
13		4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20
14	*	4-088-601-01	HOLDER (R), MIRROR
15	*	4-088-115-01	BOARD, REAR KP-57WV600 ONLY
15	*	4-091-605-01	BOARD, REAR KP-57WV700 ONLY
16	*	4-088-630-01	PANEL R, SIDE KP-57WV600 ONLY
16	*	4-088-607-01	PANEL (R), SIDE KP-57WV700 ONLY
17	*	4-088-541-01	HANDLE
18		4-088-631-01	SKIRT, FRONT KP-57WV600 ONLY
18		4-088-603-01	SKIRT, FRONT KP-57WV700 ONLY
19		4-075-020-01	FOOT, PLASTIC
20	*	A-1400-748-A	HA MOUNT
21	*	A-1300-323-A	HM COMPLETE PC BOARD
22		4-088-572-01	LABEL, INPUT TERMINAL
23		4-088-569-01	BRACKET, INPUT TERMINAL
24		4-088-571-01	PLATE, INPUT TERMINAL
25		3-973-975-41	DAMPER, OIL
26	*	A-1400-747-A	HB MOUNT
27		4-088-570-01	COVER, INPUT TERMINAL
28		4-088-573-01	SPRING
29		4-047-464-01	CATCHER, PUSH
30	*	4-088-629-01	PANEL L, SIDE KP-57WV600 ONLY
30	*	4-088-606-01	PANEL (L), SIDE KP-57WV700 ONLY
31		4-088-622-01	BUTTON KP-57WV600 ONLY
31		4-088-585-01	BUTTON KP-57WV700 0NLY
32		X-4040-323-1	GRILLE ASSY, SPEAKER KP-57WV600 ONLY
32		X-4040-326-1	GRILLE ASSY, SPEAKER KP-57WV700 ONLY
33		4-088-588-01	GUIDE, LED
34		4-088-621-01	PANEL, CONTROL KP-57WV600 ONLY
34		4-088-584-01	PANEL, CONTROL KP-57WV700 0NLY
35		4-088-586-01	GUIDE, LED

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-2. COVER (KP-65WV600/65WV700 0NLY)

● 7-685-648-79 SCREW +BVTP 3X12 TYPE2 IT-3
■ 7-685-661-14 SCREW +BVTP 4X12



REF.NO.		PART NO.	DESCRIPTION
1		X-4040-449-1	BEZNET ASSY
			KP-65WV600 ONLY
1		X-4040-447-1	BEZNET ASSY
			KP-65WV700 ONLY
2		A-1603-724-A	CONTRAST SCREEN ASSY
			KP-65WV600 ONLY
2		A-1603-722-A	CONTRAST SCREEN ASSY
			KP-65WV700 ONLY
3		4-088-627-11	PLATE, DIFFUSION (WL)
			KP-65WV600 ONLY
3		4-088-594-11	PLATE, DIFFUSION (WL)
			KP-65WV700 ONLY
4		4-088-626-11	PLATE, DIFFUSION (WF)
			KP-65WV600 ONLY
4		4-088-596-11	PLATE, DIFFUSION (WF)
			KP-65WV700 ONLY
5	*	4-089-179-01	HOLDER, SCREEN SHORT
6	*	A-1400-759-A	SR MOUNT
7		4-088-460-11	CUSHION, SCREEN
8	*	4-088-461-01	HOLDER, SCREEN
9		4-088-579-01	HOLDER, MIRROR SLIDE
10	*	4-088-577-01	MIRROR
11	*	4-088-580-01	HOLDER, MIRROR BASE
12		4-075-020-01	FOOT, PLASTIC
13		4-081-063-01	SCREW, DOME WASHER HEX TAP 4 X 20
14		4-088-572-01	LABEL, INPUT TERMINAL
15		4-088-569-01	BRACKET, INPUT TERMINAL
16		4-088-571-01	PLATE, INPUT TERMINAL

REF.NO.		PART NO.	DESCRIPTION
17		3-973-975-41	DAMPER, OIL
18	*	A-1400-747-A	HB MOUNT
19		4-088-570-01	COVER, INPUT TERMINAL
20		4-088-573-01	SPRING
21		4-047-464-01	CATCHER, PUSH
22	*	4-088-575-01	BOARD, REAR
23	*	4-088-541-01	HANDLE
24		4-088-620-01	SKIRT, FRONT
			KP-65WV600 ONLY
24		4-088-574-01	SKIRT, FRONT
			KP-65WV700 ONLY
25		4-088-460-01	CUSHION, SCREEN
26	*	A-1300-323-A	HM COMPLETE PC BOARD
27		4-088-622-01	BUTTON
			KP-65WV600 ONLY
27		4-088-585-01	BUTTON
			KP-65WV700 0NLY
28		X-4040-321-1	GRILLE ASSY, SPEAKER
			KP-65WV600 ONLY
28		X-4040-325-1	GRILLE ASSY, SPEAKER
			KP-65WV700 ONLY
29		4-088-588-01	GUIDE, LED
30		4-088-621-01	PANEL, CONTROL
			KP-65WV600 ONLY
30		4-088-584-01	PANEL, CONTROL
			KP-65WV700 0NLY
31		4-088-586-01	GUIDE, LED
32	*	A-1400-748-A	HA MOUNT

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SERVICE MANUAL DA-4X CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-57WV600	*RM-Y188*	*US/CND*	*SCC-P92D-A*
KP-57WV700	*RM-Y188*	*US/CND*	*SCC-P92B-A*
KP-65WV600	*RM-Y188*	*US/CND*	*SCC-P92C-A*
KP-65WV700	*RM-Y188*	*US/CND*	*SCC-P92A-A*

CORRECTION- 2

SUBJECT: EXPLODED VIEW COVER PART NUMBERS

Correct the service manual as shown.
File this Correction with the service manual.

☛ : Corrected Item

Section 6: Exploded View
6-1. COVER (KP-57WV600/57WV700 ONLY) (Page 107)

INCORRECT

REF. NO.		PART NO.	DESCRIPTION
15	*	4-088-115-01	BOARD, REAR KP-57WV600 ONLY
15	*	4-091-605-01	BOARD, REAR KP-57WV700 ONLY
NOT LISTED			

CORRECT

	REF. NO.		PART NO.	DESCRIPTION
☛	15	*	4-091-115-01	BOARD, REAR KP-57WV600 ONLY
☛	15	*	4-088-605-01	BOARD, REAR KP-57WV700 ONLY
☛	36	*	4-088-599-01	COVER (57), MIRROR

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SECTION 6: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

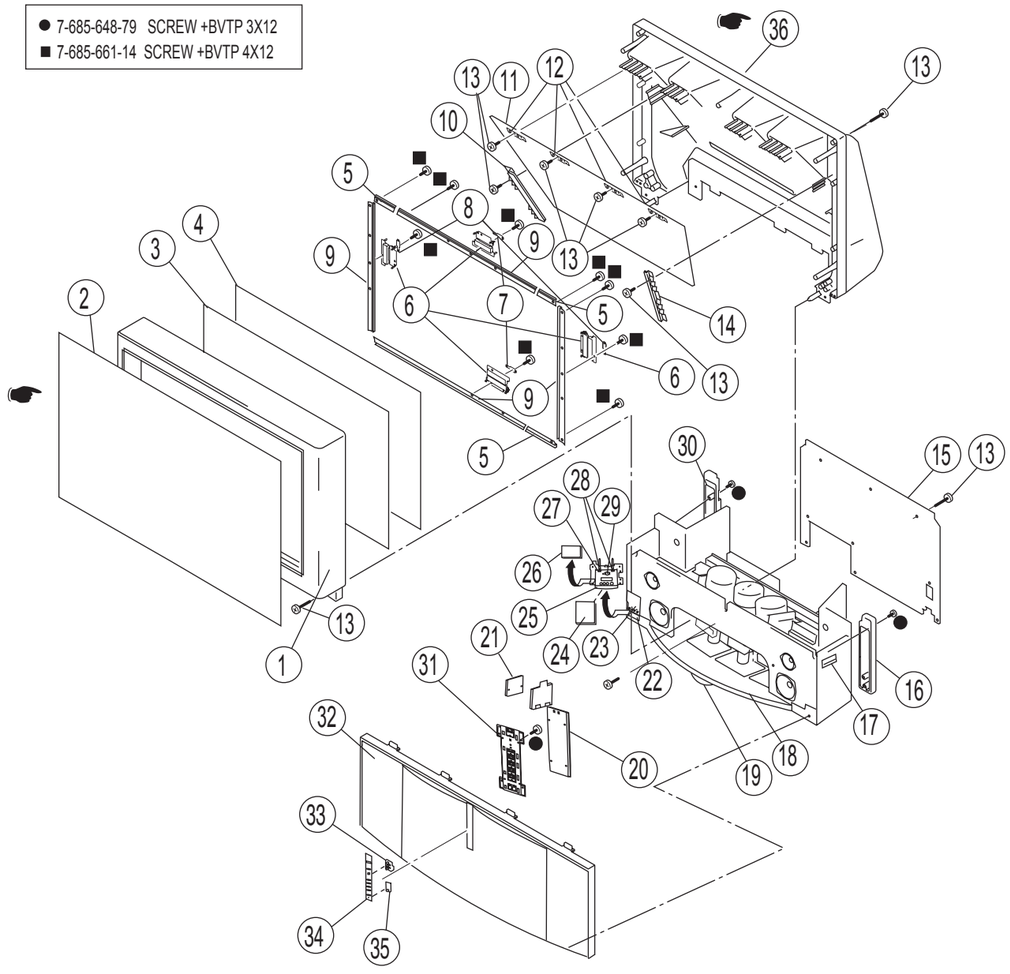
The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-1. COVER (KP-57WV600/57WV700 0NLY)



REF.NO.		PART NO.	DESCRIPTION
1		X-4040-450-1	BEZNET ASSY
			KP-57WV600 ONLY
1		X-4040-448-1	BEZNET ASSY
			KP-57WV700 ONLY
2		A-1603-725-A	CONTRAST SCREEN ASSY
			KP-57WV600 ONLY
2		A-1603-723-A	CONTRAST SCREEN ASSY
			KP-57WV700 ONLY
3		4-088-638-11	PLATE, DIFFUSION (WL)
			KP-57WV600 ONLY
3		4-088-611-11	PLATE, DIFFUSION (WL)
			KP-57WV700 ONLY
4		4-088-637-11	PLATE, DIFFUSION (WF)
			KP-57WV600 ONLY
4		4-088-610-11	PLATE, DIFFUSION (WF)
			KP-57WV700 ONLY
5	*	4-089-180-01	HOLDER, SCREEN SHORT
6	*	A-1400-759-A	SR MOUNT
7		4-088-460-21	CUSHION, SCREEN
8		4-088-460-31	CUSHION, SCREEN
9	*	4-088-461-01	HOLDER, SCREEN
10	*	4-088-600-01	HOLDER (L), MIRROR
11		4-088-598-01	MIRROR
12	*	4-081-501-01	HOLDER, MIRROR
13		4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20
14	*	4-088-601-01	HOLDER (R), MIRROR
☛ 15	*	4-091-115-01	BOARD, REAR
			KP-57WV600 ONLY
☛ 15	*	4-088-605-01	BOARD, REAR
			KP-57WV700 ONLY
16	*	4-088-630-01	PANEL R, SIDE
			KP-57WV600 ONLY
16	*	4-088-607-01	PANEL (R), SIDE
			KP-57WV700 ONLY
17	*	4-088-541-01	HANDLE
18		4-088-631-01	SKIRT, FRONT
			KP-57WV600 ONLY
18		4-088-603-01	SKIRT, FRONT
			KP-57WV700 ONLY
19		4-075-020-01	FOOT, PLASTIC
20	*	A-1400-748-A	HA MOUNT
21	*	A-1300-323-A	HM COMPLETE PC BOARD
22		4-088-572-01	LABEL, INPUT TERMINAL
23		4-088-569-01	BRACKET, INPUT TERMINAL
24		4-088-571-01	PLATE, INPUT TERMINAL
25		3-973-975-41	DAMPER, OIL
26	*	A-1400-747-A	HB MOUNT
27		4-088-570-01	COVER, INPUT TERMINAL
28		4-088-573-01	SPRING
29		4-047-464-01	CATCHER, PUSH
30	*	4-088-629-01	PANEL L, SIDE
			KP-57WV600 ONLY
30	*	4-088-606-01	PANEL (L), SIDE
			KP-57WV700 ONLY
31		4-088-622-01	BUTTON
			KP-57WV600 ONLY
31		4-088-585-01	BUTTON
			KP-57WV700 0NLY
32		X-4040-323-1	GRILLE ASSY, SPEAKER
			KP-57WV600 ONLY
32		X-4040-326-1	GRILLE ASSY, SPEAKER
			KP-57WV700 ONLY
33		4-088-588-01	GUIDE, LED
34		4-088-621-01	PANEL, CONTROL
			KP-57WV600 ONLY
34		4-088-584-01	PANEL, CONTROL
			KP-57WV700 0NLY
35		4-088-586-01	GUIDE, LED
☛ 36	*	4-088-599-01	COVER (57), MIRROR

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Service Promotion Department

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SERVICE MANUAL

DA-4X CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-57WV600	*RM-Y188*	*US/CND*	*SCC-P92D-A*
KP-57WV700	*RM-Y188*	*US/CND*	*SCC-P92B-A*
KP-65WV600	*RM-Y188*	*US/CND*	*SCC-P92C-A*
KP-65WV700	*RM-Y188*	*US/CND*	*SCC-P92A-A*

SUPPLEMENT - 1

SUBJECT: REPLACED BOARDS, UPDATED PART NUMBERS

Correct the service manual as shown.
File this Supplement with the service manual.

☛ : Corrected Item

Section 5: Diagrams
- Replaced MS1 Board with BM1C Board (Page 85-87)
- Updated AD Board Schematic (Page 91-92)
- Updated D Board Schematic and PWB (Page 94-96)

Section 6: Exploded View
- 6-1. COVER (KP-57WV600/57WV700 ONLY) (Page 107)
- 6-3. CHASSIS (Page 109)
- 6-4. PICTURE TUBE (Page 110)

Section 7: Parts List
- Replaced MS1 Board with BM1C Board (Page 134)
- Updated AD Board (Page 141)
- Updated D Board (Page 145)
- Updated Accessories and Packaging (Page 163)

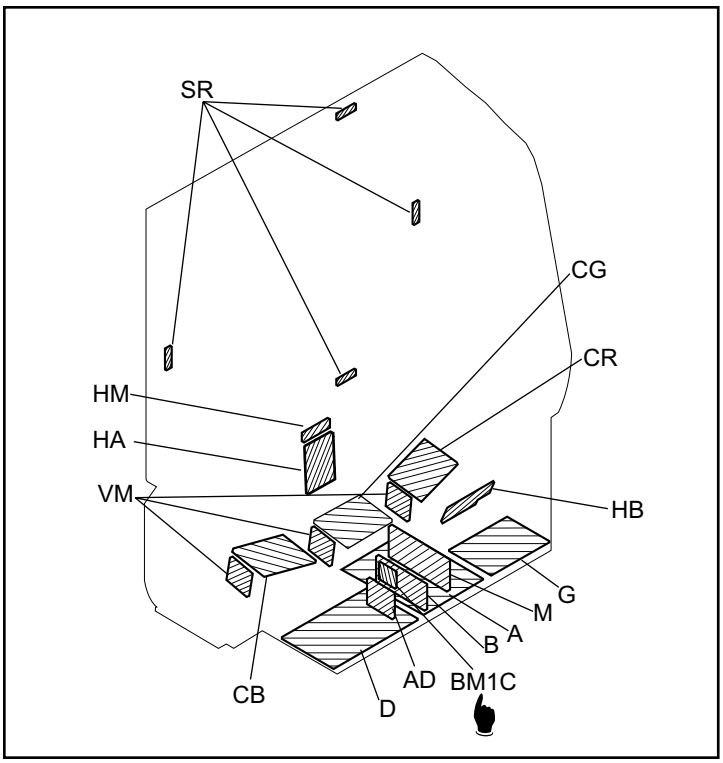
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SECTION 5: DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



5-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS INFORMATION

All capacitors are in µF unless otherwise noted. pF : µµF 50WV or less are not indicated except for electrolytics and tantalums.

All electrolytics are in 50V unless otherwise specified.

All resistors are in ohms. K=1000, M=1000k

Indication of resistance, which does not have one for rating electrical power, is as follows: Pitch : 5mm

Rating electrical power : $^1/_4$ W

$^1/_4$ W in resistance, $^1/_{10}$ W and $^1/_8$ W in chip resistance.

: nonflammable resistor.

: fusible resistor.

△ : internal component.

: panel designation and adjustment for repair.

⊥ : earth ground

⏚ : earth-chassis

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

Readings are taken with a NTSC color-bar signal input.

Readings are taken with a 10M digital multimeter.

Voltages are DC with respect to ground unless otherwise noted.

Voltage variations may be noted due to normal production tolerances.

All voltages are in V.

S : Measurement impossibillity.

▬▬ : B+ line

▬ ▬ : B-line. (Actual measured value may be different).

⇨ : signal path. (RF)

Circled numbers are waveform references.

The components identified by ⋈ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be necessary, replace only with the value originally used.

When replacing components identified by ◪, make the necessary adjustments as indicated. If the results do not meet the specified value, change the component identified by ⋈ and repeat the adjustment until the specified value is achieved.

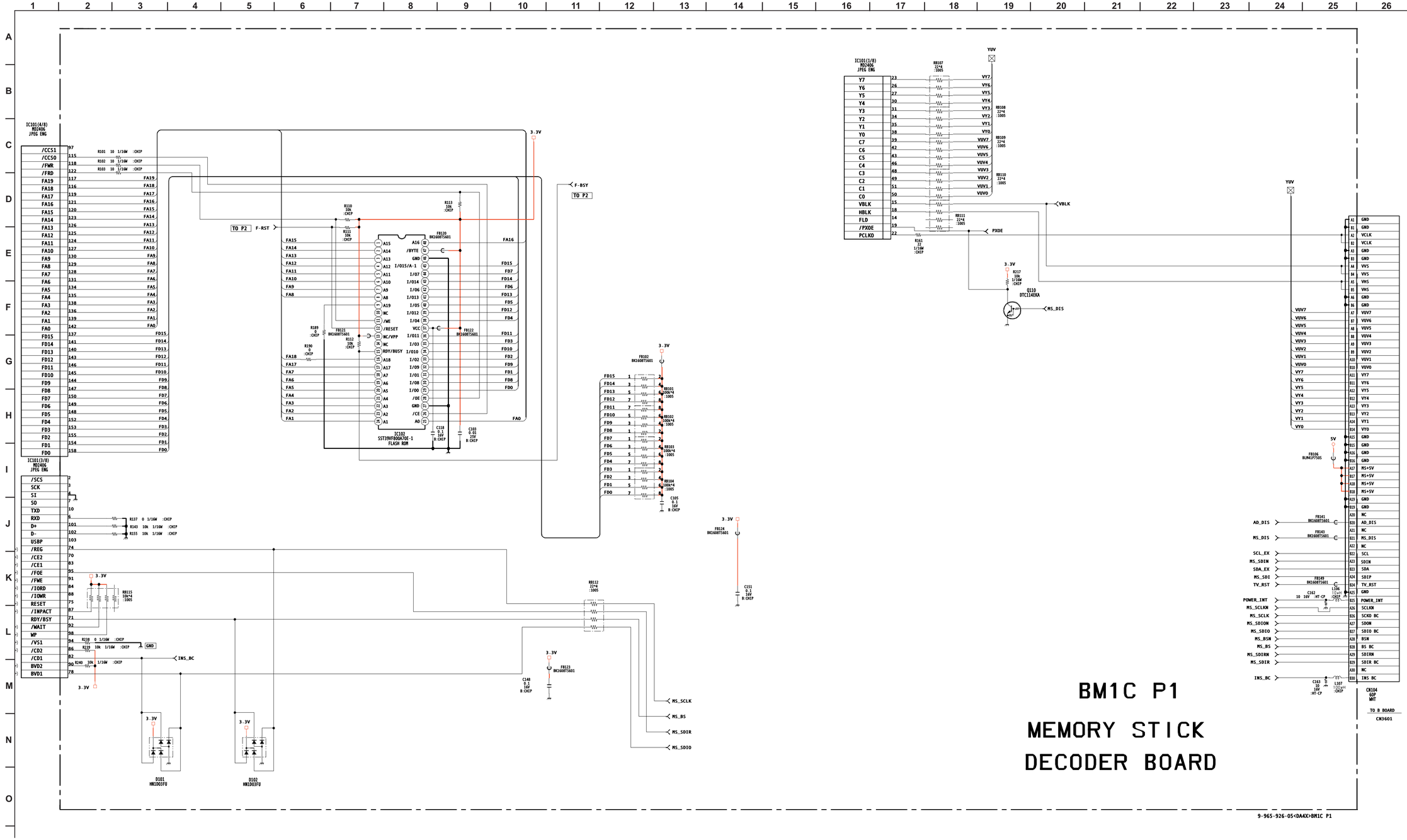
(Refer to adjustments in Sections 3-1 and 3-2.)

When replacing the parts listed in the table below, it is important to perform the related adjustments.

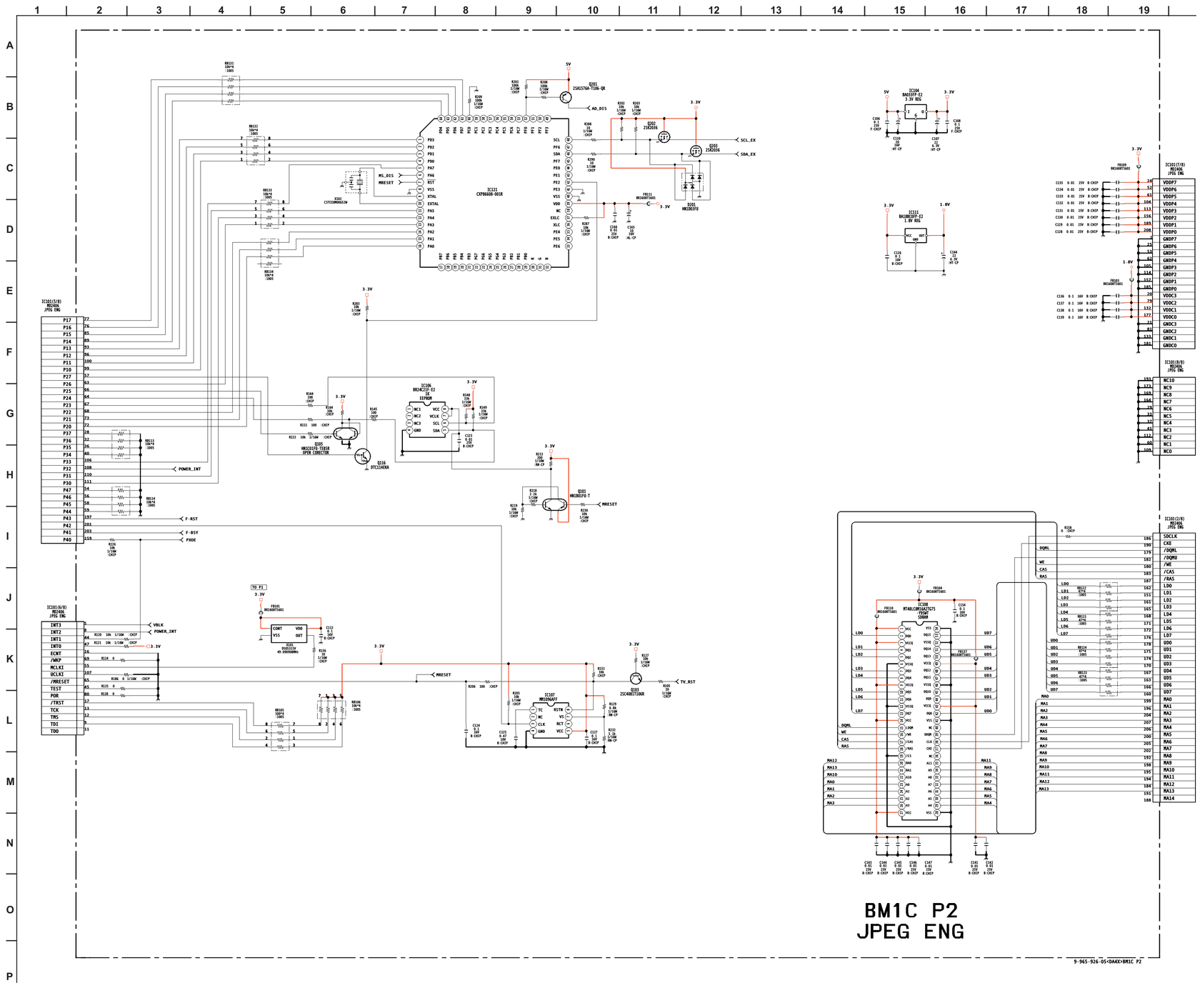
Part Replaced (◪)	Adjustment (⋈)
A BOARD: HV Block, T8005 (FBT), T8004 (LOT), R8129, D8038, R8128, C8129, R8223, R8102, R8230, R8055, R8153, C8083, R8139, C8079, D8051, D8013, R8140, D8043, R8163, C8090, D8015. R8142, R8131, Q8021, IC8006, D Board	**HV REGULATOR** VR8001
A BOARD: HV Block, T8005 (FBT), T8004 (LOT), C8123, C8124, Q8043, Q8035, C8104, R8171, D8036, R8043, R8035, C8088, C8086, R8159, D8022, C8054, R8166, C8100, IC8008, D8019, D8020, R8201, C8118, D8028, R8196, FB8001, D Board	**HV HOLD DOWN** VR8002

BM1C BOARD SCHEMATIC DIAGRAM (1 OF 2)

The BM1C board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1300-690-A BM1C Board, Complete



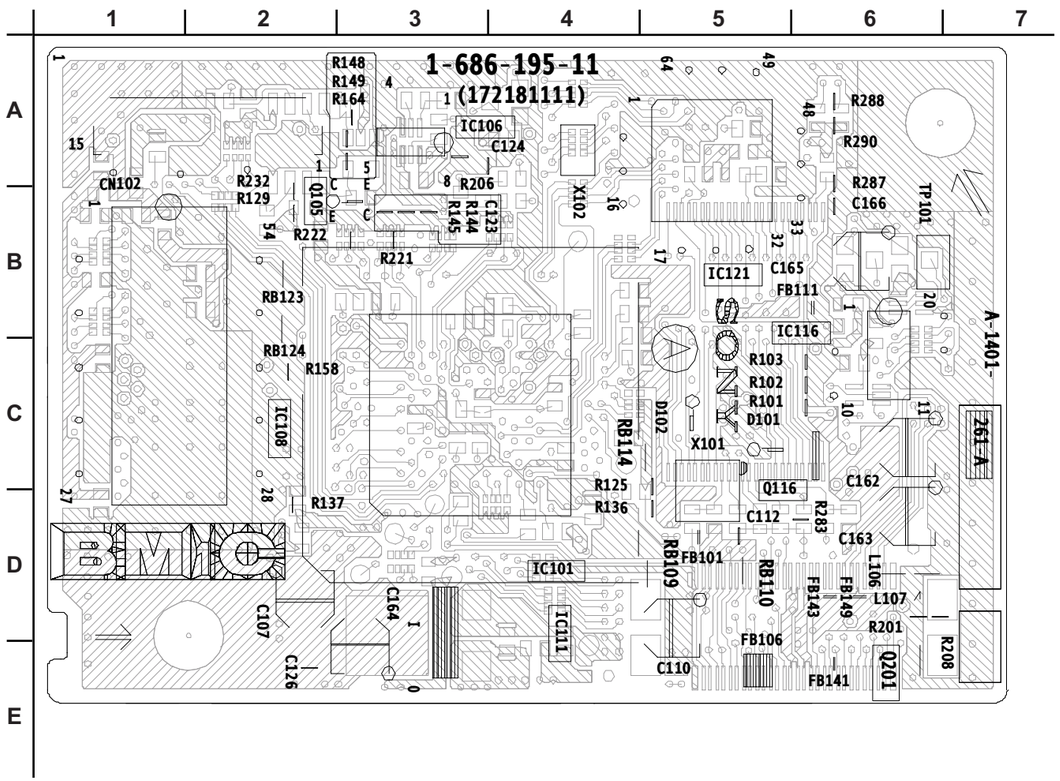
BM1C BOARD SCHEMATIC DIAGRAM (2 OF 2)



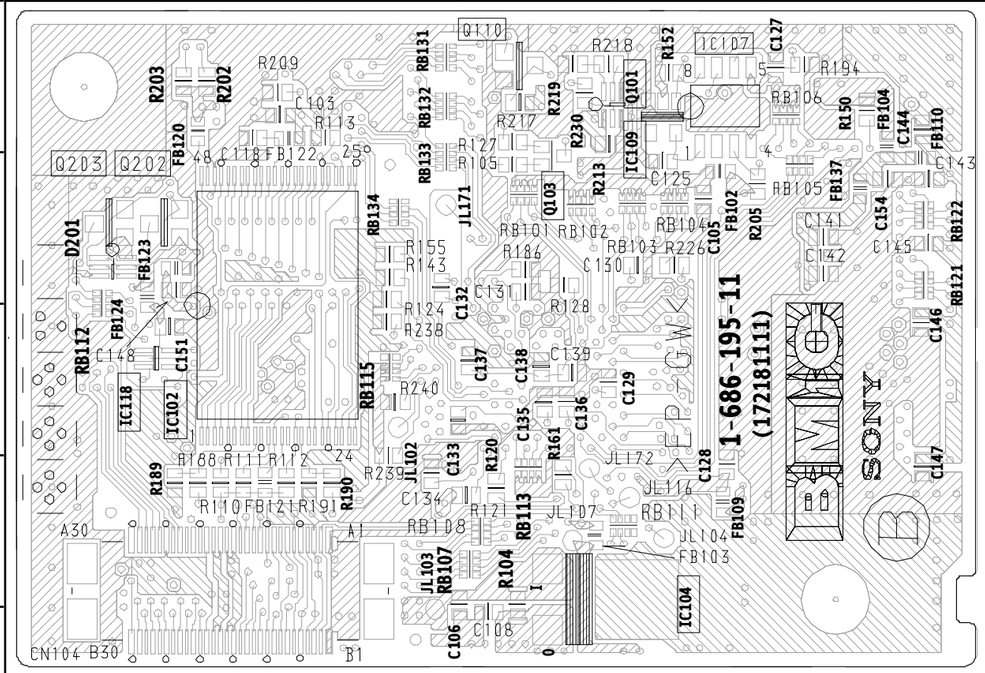
BM1C

[MEMORY STICK, DECODER BOARD, JPEG ENG]

[COMPONENT SIDE]



[CONDUCTOR SIDE]

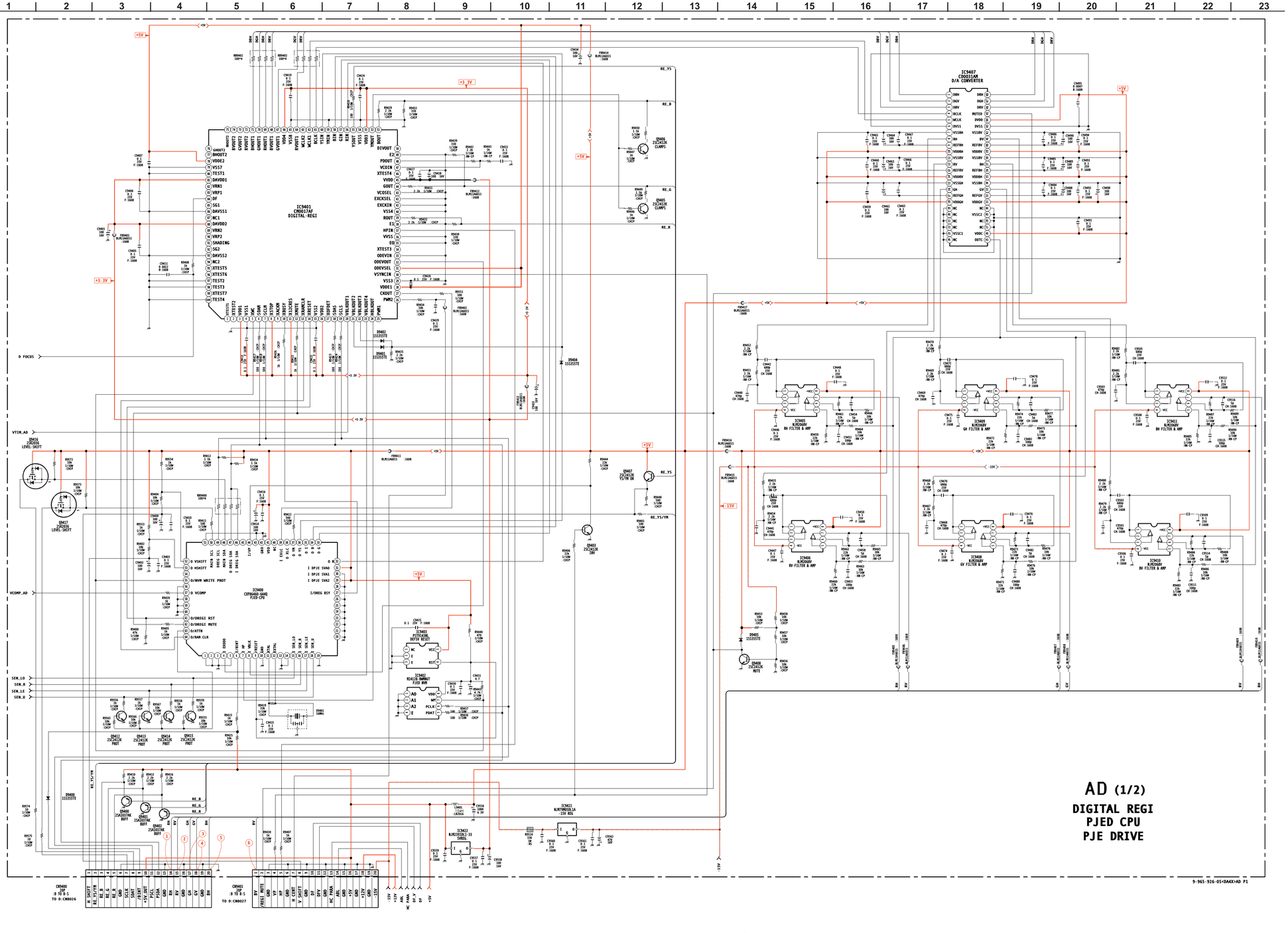


AD BOARD SCHEMATIC DIAGRAM (1 OF 2)

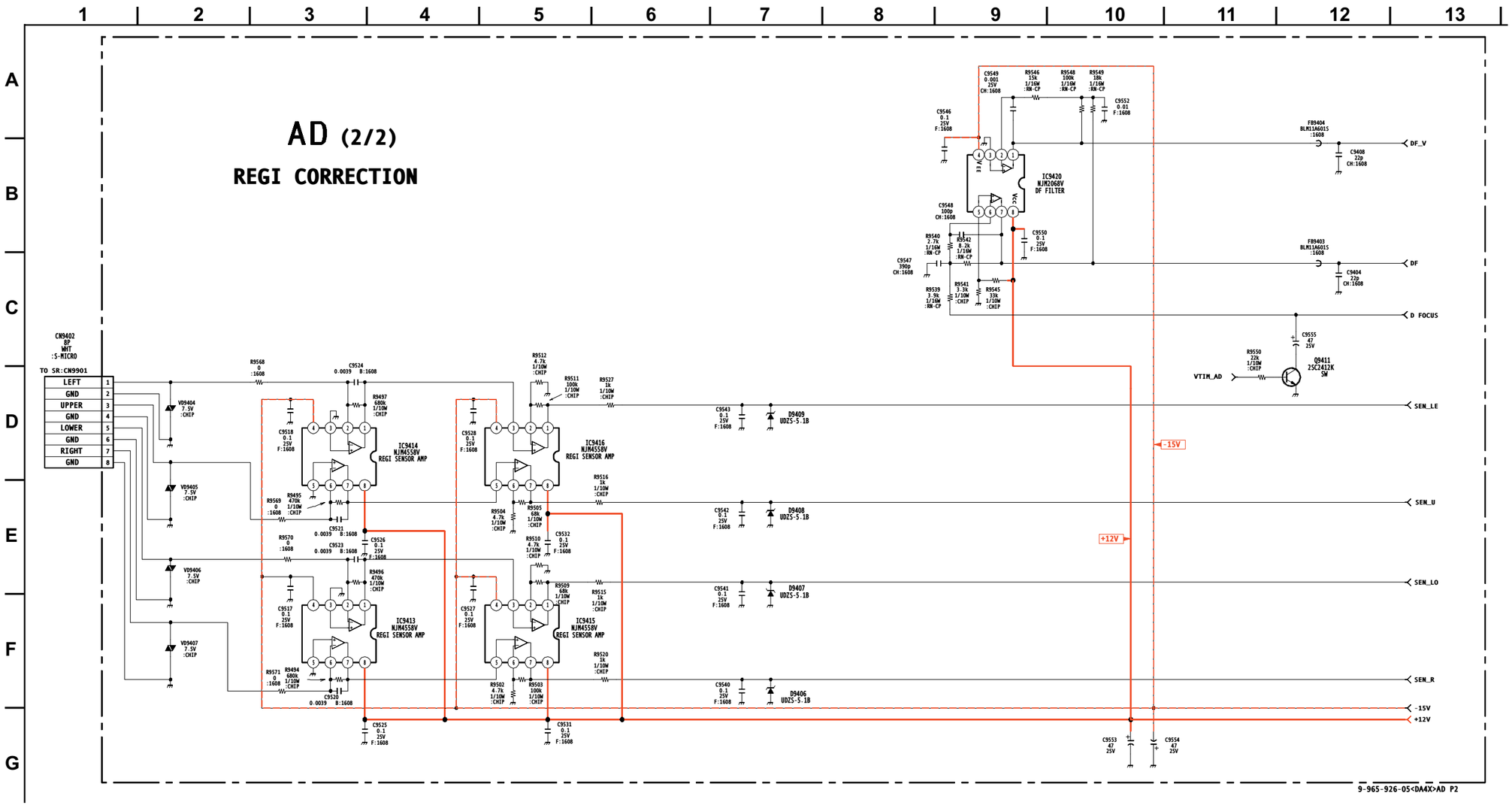
The AD board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1300-887-A AD Board, Complete

AD BOARD WAVEFORMS

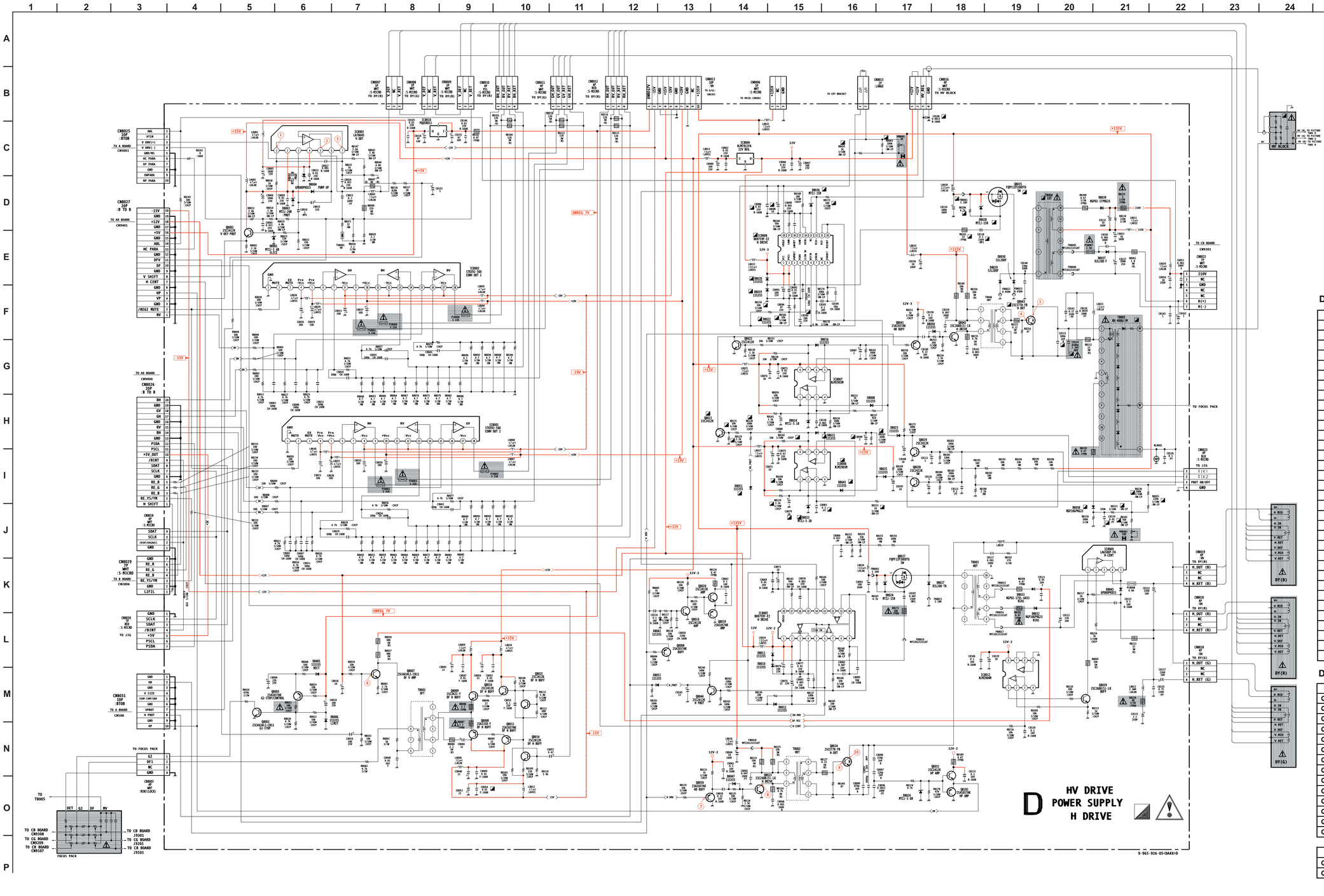
1 — 2.1 Vp-p (V)	2 — 2.3 Vp-p (V)	3 — 2.1 Vp-p (V)
4 — 2.5 Vp-p (V)	5 — 2.0 Vp-p (V)	6 — 2.3 Vp-p (V)



AD BOARD SCHEMATIC DIAGRAM (2 OF 2)



D BOARD SCHEMATIC DIAGRAM



D BOARD WAVEFORMS

1 — 500 mVp-p (V)	2 — 53.2 Vp-p (V)
3 — 500 mVp-p (V)	4 — 14.7 Vp-p (H)
5 — 940 Vp-p (H)	6 — 6.5 Vp-p (V)
7 — 3.5 Vp-p (H)	8 — 104 Vp-p (H)
9 — 7.6 Vp-p (H)	10 — 1030 Vp-p (H)

D BOARD IC VOLTAGE LIST

IC8001		14	0.3	15	GND	10	7.4
PIN	VOLT	15	0	16	3.2	11	7.4
1	GND	16	0	17	2.6	12	7.4
2	4.3	17	-22	18	9.1	13	GND
3	N/C	18	0.1	IC8006		14	7.1
4	-22.0	IC8003		PIN	VOLT	15	GND
5	22.0	PIN	VOLT	1	0.1	16	3.2
6	-0.3	1	1.3	2	5.0	17	2.6
7	-0.3	2	15.0	3	4.5	18	9.1
8	-22.0	3	-13.1	4	GND	IC8009	
9	-0.5	4	-15.0	5	0.0	PIN	VOLT
10	22.0	5	0.4	6	5.0	1	98.2
11	0.1	6	15.0	7	0.1	2	98.2
12	-22.0	7	1.3	8	15.0	3	94.0
13	0.0	IC8004		IC8007		4	97.8
14	0.0	PIN	VOLT	PIN	VOLT	5	101.1
15	0.0	I	15.0	1	0.1	IC8010	
16	0.0	O	12.0	2	5.0	PIN	VOLT
17	-22.0	G	GND	3	4.0	I	7.0
18	0.1	IC8005		4	GND	O	5.0
IC8002		PIN	VOLT	5	0.0	G	GND
PIN	VOLT	1	12.0	6	5.0	IC8012	
1	GND	2	12.0	7	0.1	PIN	VOLT
2	4.3	3	5.8	8	15.0	1	2.7
3	N/C	4	GND	IC8008		2	2.1
4	-22.0	5	7.9	PIN	VOLT	3	2.1
5	22.0	6	3.8	1	12.0	4	GND
6	-0.1	7	3.8	2	12.0	5	GND
7	-0.1	8	N/C	3	6.0	6	0.0
8	-22.0	9	3.8	4	GND	7	0.0
9	0.0	10	3.6	5	8.0	8	12.0
10	22.0	11	3.6	6	7.4	All voltages are in V.	
11	0.5	12	3.6	7	7.4		
12	-22.0	13	GND	8	N/C		
13	0.3	14	7.1	9	3.3		

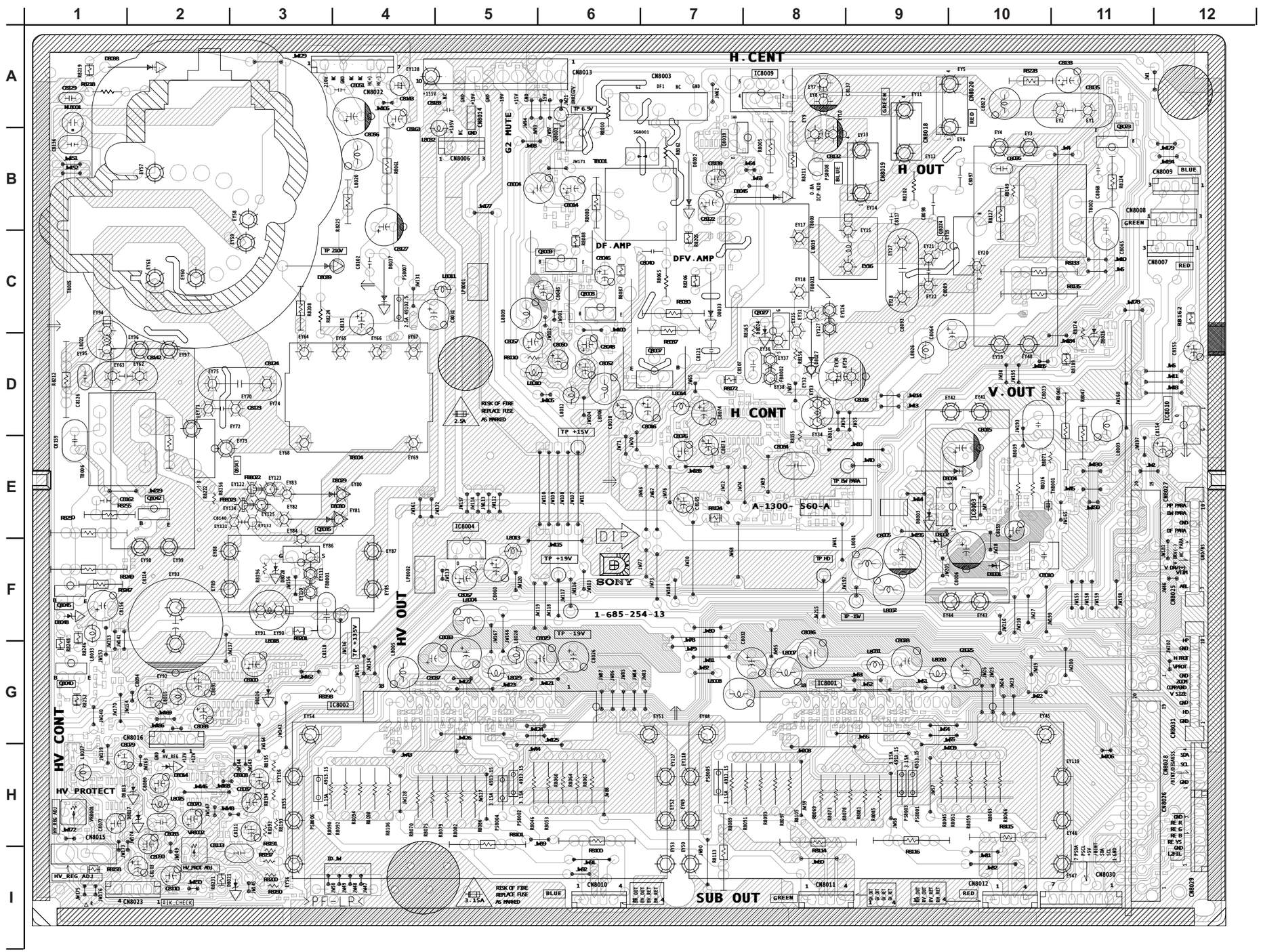
D BOARD TRANSISTOR VOLTAGE LIST

	B	C	E		B	C	E
Q8001	-0.4	15.0	0.1	Q8021	0.0	8.9	GND
Q8002	0	13.0	GND	Q8022	0.0	8.9	GND
Q8003	14.6	0.0	14.6	Q8023	-0.5	68.0	GND
Q8004	3.4	GND	4.0	Q8024	0.1	242.0	GND
Q8007	5.8	204.0	5.2	Q8028	0.5	0.0	GND
Q8008	2.8	-22.0	3.3	Q8029	0.5	0.0	GND
Q8009	4.0	22.0	3.4	Q8030	3.4	GND	4.0
Q8010	4.5	22.0	4.0	Q8031	0.2	12.0	0.6
Q8011	2.3	-22.0	2.7	Q8039	2.7	76.7	2.1
Q8014	-20.0	2.3	-20.6	Q8041	3.4	GND	8.9
Q8015	2.9	4.5	2.3	Q8042	9.6	29.8	GND
Q8016	-0.3	7.4	GND	Q8043	8.9	192.0	0.1
Q8019	7.4	GND	7.2	Q8044	0.6	0.0	GND
Q8020	7.4	12.0	7.2	Q8101	0.2	GND	0.6

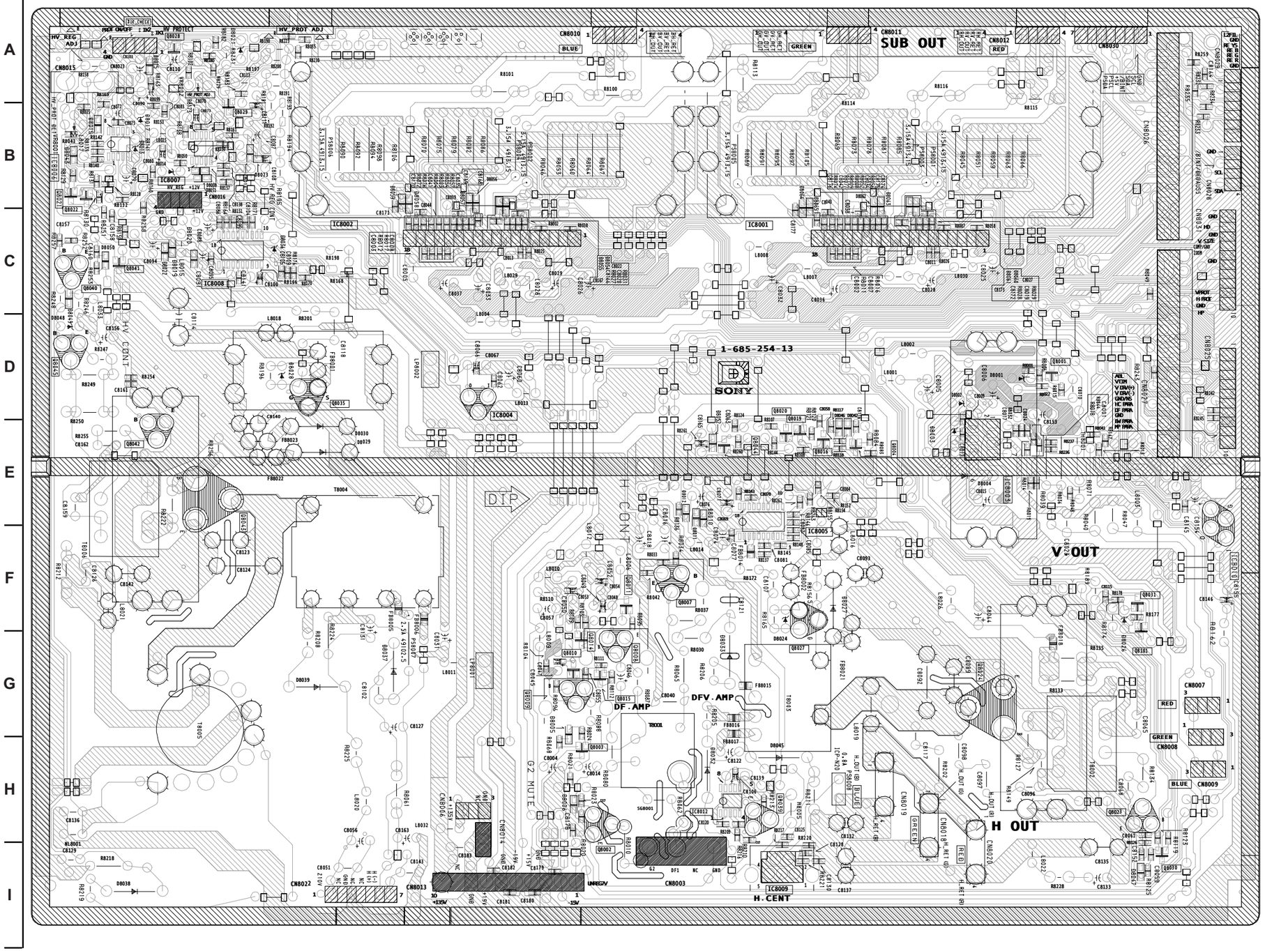
	D	G	S
Q8027	112.3	131.1	135.0
Q8035	115.6	130.9	135.9

All voltages are in V.

D [HV DRIVE, POWER SUPPLY, H DRIVE] [COMPONENT SIDE]



D [HV DRIVE, POWER SUPPLY, H DRIVE] [CONDUCTOR SIDE]



D BOARD LOCATOR LIST

IC		DIODE	
IC8001	C-7	D8001	D-10
IC8002	C-3	D8002	D-9
IC8003	E-10	D8003	D-9
IC8004	D-5	D8004	E-9
IC8005	F-8	D8005	H-5
IC8006	B-1	D8006	H-6
IC8007	B-2	D8008	B-2
IC8008	C-2	D8010	E-7
IC8009	I-8	D8011	E-7
IC8010	F-12	D8012	E-7
IC8012	H-7	D8013	B-2
TRANSISTOR		D8014	B-2
Q8001	D-10	D8015	B-1
Q8002	H-6	D8016	B-3
Q8003	G-6	D8019	C-2
Q8004	E-9	D8020	C-2
Q8007	F-7	D8022	C-2
Q8008	G-6	D8023	B-3
Q8009	G-5	D8024	G-7
Q8010	G-6	D8025	A-2
Q8011	F-6	D8026	G-11
Q8014	G-6	D8027	F-8
Q8015	G-6	D8028	D-3
Q8016	E-8	D8029	E-3
Q8019	D-8	D8030	E-3
Q8020	D-8	D8032	H-7
Q8021	B-1	D8033	G-7
Q8022	B-1	D8036	C-3
Q8023	H-11	D8037	G-4
Q8024	G-10	D8038	I-2
Q8027	F-8	D8039	G-3
Q8028	A-2	D8042	D-8
Q8029	B-3	D8043	B-1
Q8030	I-11	D8045	H-8
Q8031	F-11	D8047	I-11
Q8035	D-3	D8050	C-1
Q8039	H-8	D8051	B-2
Q8041	C-2	D8052	D-7
Q8042	E-2		
Q8043	E-3		
Q8044	E-8		
Q8101	G-11		

SECTION 6: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

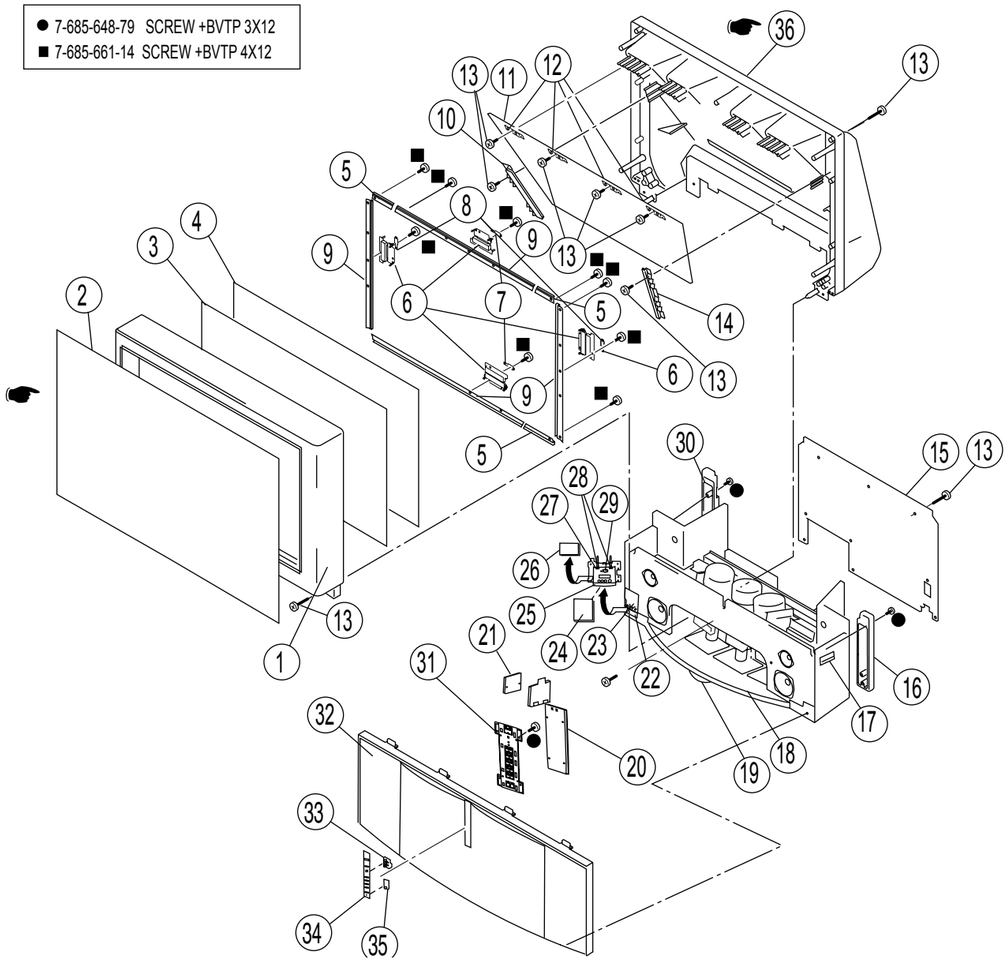
The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-1. COVER (KP-57WV600/57WV700 0NLY)



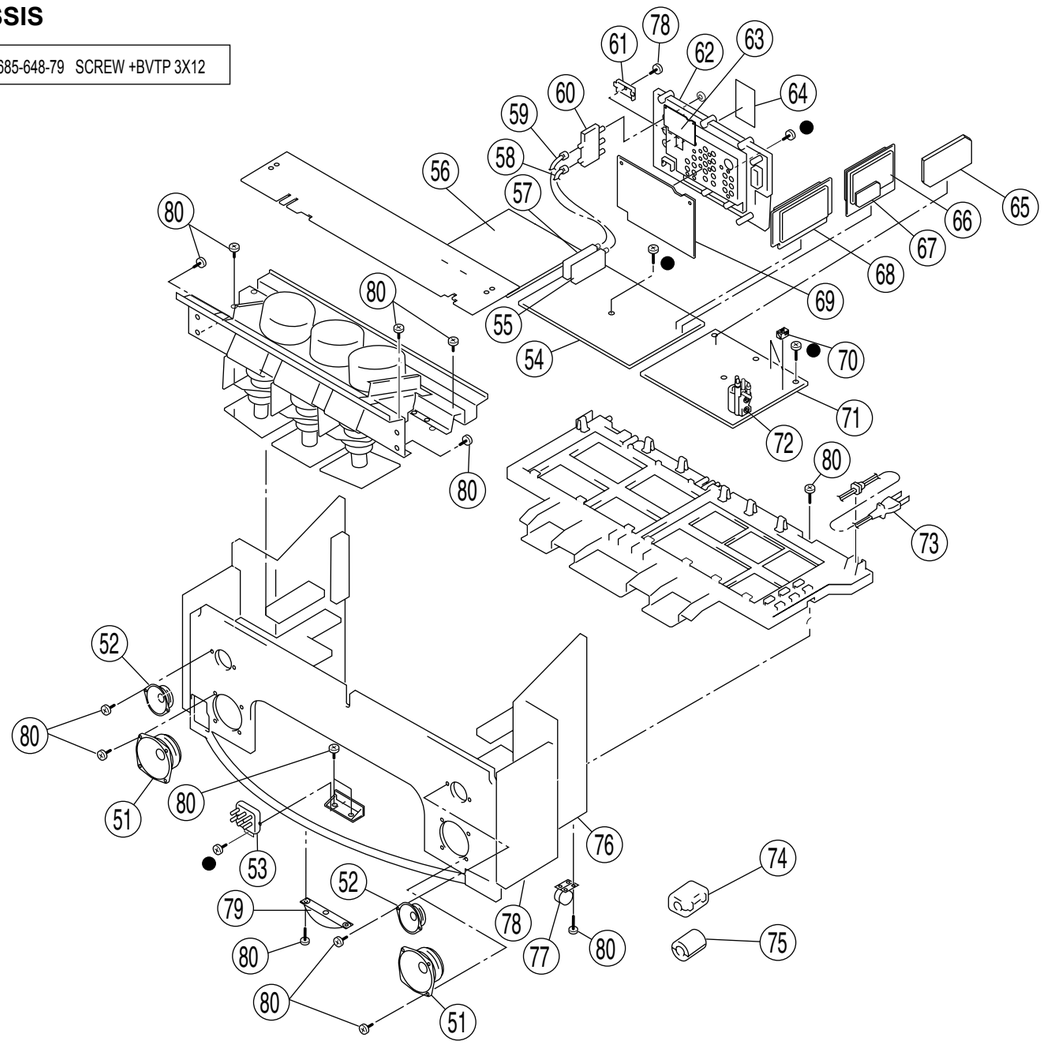
REF.NO.		PART NO.	DESCRIPTION
1		X-4040-450-3	BEZNET ASSY KP-57WV600 ONLY
1		X-4040-448-3	BEZNET ASSY KP-57WV700 ONLY
2		A-1603-725-A	CONTRAST SCREEN ASSY KP-57WV600 ONLY
2		A-1603-723-A	CONTRAST SCREEN ASSY KP-57WV700 ONLY
3		4-088-638-11	PLATE, DIFFUSION (WL) KP-57WV600 ONLY
3		4-088-611-11	PLATE, DIFFUSION (WL) KP-57WV700 ONLY
4		4-088-637-11	PLATE, DIFFUSION (WF) KP-57WV600 ONLY
4		4-088-610-11	PLATE, DIFFUSION (WF) KP-57WV700 ONLY
5	*	4-089-180-01	HOLDER, SCREEN SHORT
6	*	A-1400-759-A	SR MOUNT
7		4-088-460-21	CUSHION, SCREEN
8		4-088-460-31	CUSHION, SCREEN
9	*	4-088-461-01	HOLDER, SCREEN
10	*	4-088-600-01	HOLDER (L), MIRROR
11		4-088-598-01	MIRROR
12	*	4-081-501-01	HOLDER, MIRROR
13		4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20
14	*	4-088-601-01	HOLDER (R), MIRROR
15	*	4-091-115-01	BOARD, REAR KP-57WV600 ONLY
15	*	4-088-605-01	BOARD, REAR KP-57WV700 ONLY
16	*	4-088-630-01	PANEL R, SIDE KP-57WV600 ONLY
16	*	4-088-607-01	PANEL (R), SIDE KP-57WV700 ONLY
17	*	4-088-541-01	HANDLE
18		4-088-631-01	SKIRT, FRONT KP-57WV600 ONLY
18		4-088-603-01	SKIRT, FRONT KP-57WV700 ONLY
19		4-075-020-01	FOOT, PLASTIC
20	*	A-1400-748-A	HA MOUNT
21	*	A-1300-323-A	HM COMPLETE PC BOARD
22		4-088-572-01	LABEL, INPUT TERMINAL
23		4-088-569-01	BRACKET, INPUT TERMINAL
24		4-088-571-01	PLATE, INPUT TERMINAL
25		3-973-975-41	DAMPER, OIL
26	*	A-1400-747-A	HB MOUNT
27		4-088-570-01	COVER, INPUT TERMINAL
28		4-088-573-01	SPRING
29		4-047-464-01	CATCHER, PUSH
30	*	4-088-629-01	PANEL L, SIDE KP-57WV600 ONLY
30	*	4-088-606-01	PANEL (L), SIDE KP-57WV700 ONLY
31		4-088-622-01	BUTTON KP-57WV600 ONLY
31		4-088-585-01	BUTTON KP-57WV700 0NLY
32		X-4040-323-1	GRILLE ASSY, SPEAKER KP-57WV600 ONLY
32		X-4040-326-2	GRILLE (57) ASSY, SPEAKER KP-57WV700 ONLY
33		4-088-588-01	GUIDE, LED
34		4-088-621-01	PANEL, CONTROL KP-57WV600 ONLY
34		4-088-584-01	PANEL, CONTROL KP-57WV700 ONLY
35		4-088-586-01	GUIDE, LED
36		4-088-599-01	COVER (57), MIRROR

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-3. CHASSIS

● 7-685-648-79 SCREW +BVTP 3X12



REF.NO.		PART NO.	DESCRIPTION
51		1-825-191-11	LOUDSPEAKER (13 CM)
52		1-825-200-11	LOUDSPEAKER (6.6 CM)
⚠ 53		1-223-925-81	RESISTOR ASSY (HIGH-VOLTAGE)
54	*	A-1300-406-A	A BOARD, COMPLETE
55		8-598-593-50	TUNER, FSS BTF-WA421
56	*	A-1300-410-A	G BOARD, COMPLETE
57		8-598-594-30	TUNER, FSS BTF-FA421
58	*	1-555-400-00	CABLE, PIN
59	*	1-557-056-31	CABLE, P-P
⚠ 60		1-771-787-13	SWITCH, RF ANTENNA
61		4-069-675-01	CAP, TERMINAL BOARD
62		4-088-590-01	BOARD, TERMINAL
63	*	A-1300-324-A	UD BOARD, COMPLETE
64		4-088-591-01	LABEL, TERMINAL
☛ 65	*	A-1300-887-A	AD BOARD, COMPLETE
66	*	A-1300-407-A	B BOARD, COMPLETE
☛ 67	*	A-1300-690-A	BM1C BOARD, COMPLETE
68	*	A-1300-646-A	M BOARD, COMPLETE
69	*	A-1300-321-A	U BOARD, COMPLETE

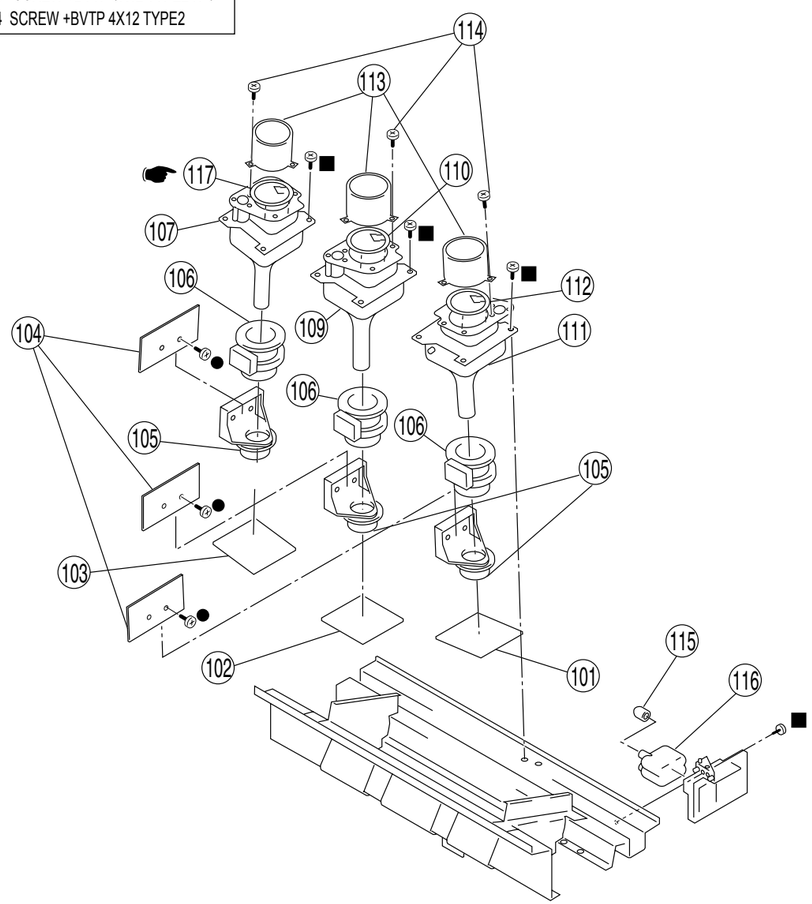
REF.NO.		PART NO.	DESCRIPTION
70		3-710-578-01	COVER, VOLUME, 6 MOLD
☛ 71	*	A-1300-883-A	D BOARD, COMPLETE The high-voltage leads associated with the FBT on this board are not included and must be ordered separately.
⚠ 72		1-453-285-51	FBT ASSY, NX-4006//X4P4
⚠		1-779-095-51	LEAD ASSY, HIGH-VOLTAGE
⚠		1-900-260-40	CONNECTOR ASSY, MV
⚠ 73		1-769-837-11	CORD, POWER(WITH NOISE FILTER)
74		1-500-082-11	CLAMP, FERRITE
75		1-469-241-11	CORE, FERRITE
76		X-4040-459-1	CABINET ASSY KP-65WV600 ONLY
76		X-4040-320-1	CABINET ASSY KP-65WV700 ONLY
77		3-184-556-01	CASTER
78		4-030-850-01	SOCKET, CASTER
79		4-075-020-01	FOOT, PLASTIC
80		4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20 KP-57WV600/57WV700 ONLY

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

6-4. PICTURE TUBE

● 7-685-648-79 SCREW +BVTP 3X12 TYPE2 IT-3
■ 7-685-661-14 SCREW +BVTP 4X12 TYPE2



REF.NO.		PART NO.	DESCRIPTION
101		A-1401-420-A	CB MOUNT (VAR) KP-57WV600/57WV700 ONLY
101		A-1401-387-A	CB MOUNT (VAR) KP-65WV600/65WV700 ONLY
102		A-1401-419-A	CG MOUNT (VAR) KP-57WV600/57WV700 ONLY
102		A-1401-386-A	CG MOUNT (VAR) KP-65WV600/65WV700 ONLY
103	*	A-1401-385-A	CR MOUNT (VAR)
104	*	A-1401-589-A	VM MOUNT (VAR)
⚠ 105		1-452-790-31	NECK ASSY
⚠ 106		1-451-537-22	DEFLECTION YOKE
⚠ 107		8-733-647-25	CRT 07MVC41(B)-L(VM) KP-57WV600 ONLY
⚠ 107		8-733-668-25	CRT 07MVC42(B)-L KP-57WV700 ONLY
⚠ 107		8-733-665-25	CRT 07MVC61(B)-L KP-65WV600 ONLY
⚠ 107		8-733-663-25	CRT 07MVC62(B)-L KP-65WV700 ONLY
⚠ 109		8-733-652-15	CRT 07MVC21(G)-L(VM) KP-57WV600/65WV600 ONLY
⚠ 109		8-733-667-15	CRT 07MVC22(G)-L KP-57WV700/65WV700 ONLY

REF.NO.	PART NO.	DESCRIPTION
110	4-088-543-01	SHADE (G) KP-57WV700/65WV700 ONLY
⚠ 111	8-733-648-15	CRT 07MVC41(R)-L(VM) KP-57WV600 ONLY
⚠ 111	8-733-669-15	CRT 07MVC42(R)-L KP-57WV700 ONLY
⚠ 111	8-733-666-15	CRT 07MVC61(R)-L KP-65WV600 ONLY
⚠ 111	8-733-664-15	CRT 07MVC62(R)-L KP-65WV700 ONLY
112	4-088-542-01	SHADE (R) KP-57WV700/65WV700 ONLY
113	4-083-750-01	LENS (DELTA 260) KP-57WV600 ONLY
113	4-087-841-01	LENS (DELTA 265) KP-57WV700/65WV700 ONLY
113	4-087-842-01	LENS (DELTA 270) KP-65WV600 ONLY
114	4-052-894-01	SCREW (4X20), HEAD TAPPING
115	4-373-137-01	CAP (Z), RUBBER
⚠ 116	8-598-955-32	BLOCK ASSY, HV HVB-1031
117	4-090-058-01	SHADE (B) KP-57WV700/65WV700 ONLY

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

BM1C

BM1C

The BM1C board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

REF.NO.	PART NO.	DESCRIPTION	VALUES		
*	A-1300-690-A	BM1C BOARD COMPLETE			
	CAPACITOR				
C103	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C105	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C106	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C107	1-126-390-11	ELECT CHIP	22µF	20%	6.3V
C108	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C110	1-126-394-11	ELECT CHIP	10µF	20%	16V
C112	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C118	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C123	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C124	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C125	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C126	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C127	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C128	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C129	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C130	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C131	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C132	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C133	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C134	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C135	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C136	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C137	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C138	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C139	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C141	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C142	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C143	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C144	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C145	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C146	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C147	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C148	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C151	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C154	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C162	1-126-394-11	ELECT CHIP	10µF	20%	16V
C163	1-126-394-11	ELECT CHIP	10µF	20%	16V
C164	1-126-390-11	ELECT CHIP	22µF	20%	6.3V
C165	1-124-779-00	ELECT CHIP	10µF	20%	16V
C166	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
	CONNECTOR				
* CN104	1-816-933-21	CONNECTOR, BOARD TO BOARD 60P			
	DIODE				
D101	8-719-024-77	DIODE	HN1D03FU-TE85L		
D102	8-719-024-77	DIODE	HN1D03FU-TE85L		
D201	8-719-024-77	DIODE	HN1D03FU-TE85L		
	FERRITE BEAD				
FB101	1-414-921-11	FERRITE	0µH		
FB102	1-414-921-11	FERRITE	0µH		
FB103	1-414-921-11	FERRITE	0µH		
FB104	1-414-921-11	FERRITE	0µH		
FB106	1-500-451-11	FERRITE	0µH		
FB109	1-414-921-11	FERRITE	0µH		
FB110	1-414-921-11	FERRITE	0µH		
FB111	1-414-921-11	FERRITE	0µH		
FB120	1-414-921-11	FERRITE	0µH		
FB121	1-414-921-11	FERRITE	0µH		
FB122	1-414-921-11	FERRITE	0µH		
FB123	1-414-921-11	FERRITE	0µH		
FB124	1-414-921-11	FERRITE	0µH		
FB137	1-414-921-11	FERRITE	0µH		
FB141	1-414-921-11	FERRITE	0µH		
FB143	1-414-921-11	FERRITE	0µH		
FB149	1-414-921-11	FERRITE	0µH		
	IC				
IC101	6-702-978-01	IC	MD2406		
IC102	6-802-277-11	IC	SST39VF800A70E-11300-T		
IC104	8-759-460-72	IC	BA033FP-E2		
IC106	8-759-697-54	IC	BR24C21F-E2		
IC107	8-759-331-27	IC	MM1096AFF		
IC108	6-702-511-11	IC	MT48LC8M16A2TG-75-Y95WT		
IC111	8-759-832-05	IC	BA18BC0FP-E2		
IC121	8-752-932-19	IC	CXP86608-001R		

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	COIL				
L106	1-469-555-21	INDUCTOR	10µH		
L107	1-469-561-21	INDUCTOR	100µH		
	TRANSISTOR				
Q101	8-729-013-28	TRANSISTOR	HN1B01FU-TE85R		
Q103	8-729-905-35	TRANSISTOR	2SC4081-R		
Q105	8-729-427-72	TRANSISTOR	XP4501		
Q110	8-729-900-53	TRANSISTOR	DTC114EK		
Q116	8-729-900-53	TRANSISTOR	DTC114EK		
Q201	8-729-026-53	TRANSISTOR	2SA1576A-T106-QR		
Q202	8-729-028-28	TRANSISTOR	2SK2036(TE85L)		
Q203	8-729-028-28	TRANSISTOR	2SK2036(TE85L)		
	RESISTOR				
R101	1-216-797-11	METAL CHIP	10	5%	1/10W
R102	1-216-797-11	METAL CHIP	10	5%	1/10W
R103	1-216-797-11	METAL CHIP	10	5%	1/10W
R105	1-216-797-11	METAL CHIP	10	5%	1/10W
R110	1-216-833-11	METAL CHIP	10K	5%	1/10W
R111	1-216-833-11	METAL CHIP	10K	5%	1/10W
R112	1-216-833-11	METAL CHIP	10K	5%	1/10W
R113	1-216-833-11	METAL CHIP	10K	5%	1/10W
R120	1-216-833-11	METAL CHIP	10K	5%	1/10W
R121	1-216-833-11	METAL CHIP	10K	5%	1/10W
R124	1-216-864-11	SHORT CHIP			
R125	1-216-864-11	SHORT CHIP			
R127	1-216-833-11	METAL CHIP	10K	5%	1/10W
R128	1-216-864-11	SHORT CHIP			
R129	1-218-712-11	METAL CHIP	6.8K	0.50%	1/10W
R136	1-216-797-11	METAL CHIP	10	5%	1/10W
R137	1-216-864-11	SHORT CHIP			
R143	1-216-833-11	METAL CHIP	10K	5%	1/10W
R144	1-216-809-11	METAL CHIP	100	5%	1/10W
R145	1-216-809-11	METAL CHIP	100	5%	1/10W
R148	1-216-839-11	METAL CHIP	33K	5%	1/10W
R149	1-216-839-11	METAL CHIP	33K	5%	1/10W
R150	1-216-833-11	METAL CHIP	10K	5%	1/10W
R152	1-216-833-11	METAL CHIP	10K	5%	1/10W
R155	1-216-833-11	METAL CHIP	10K	5%	1/10W
R158	1-216-864-11	SHORT CHIP			
R161	1-216-801-11	METAL CHIP	22	5%	1/10W
R164	1-216-833-11	METAL CHIP	10K	5%	1/10W
R186	1-216-864-11	SHORT CHIP			
R189	1-216-864-11	SHORT CHIP			
R190	1-216-864-11	SHORT CHIP			
R201	1-216-845-11	METAL CHIP	100K	5%	1/10W
R202	1-216-833-11	METAL CHIP	10K	5%	1/10W
R203	1-216-833-11	METAL CHIP	10K	5%	1/10W
R205	1-216-833-11	METAL CHIP	10K	5%	1/10W
R206	1-216-809-11	METAL CHIP	100	5%	1/10W
R208	1-216-845-11	METAL CHIP	100K	5%	1/10W
R209	1-216-845-11	METAL CHIP	100K	5%	1/10W
R213	1-218-830-11	METAL CHIP	200	0.50%	1/10W
R217	1-216-833-11	METAL CHIP	10K	5%	1/10W
R218	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R219	1-216-833-11	METAL CHIP	10K	5%	1/10W
R221	1-216-809-11	METAL CHIP	100	5%	1/10W
R222	1-216-833-11	METAL CHIP	10K	5%	1/10W
R226	1-216-833-11	METAL CHIP	10K	5%	1/10W
R230	1-216-833-11	METAL CHIP	10K	5%	1/10W
R232	1-218-709-11	METAL CHIP	5.1K	0.50%	1/10W
R238	1-216-864-11	SHORT CHIP			
R239	1-216-833-11	METAL CHIP	10K	5%	1/10W
R240	1-216-833-11	METAL CHIP	10K	5%	1/10W
R283	1-216-833-11	METAL CHIP	10K	5%	1/10W
R287	1-216-833-11	METAL CHIP	10K	5%	1/10W
R288	1-216-797-11	METAL CHIP	10	5%	1/10W
R290	1-216-797-11	METAL CHIP	10	5%	1/10W
	RESISTOR BRIDGE				
RB101	1-234-381-21	RES, NETWORK 100KX4	(1005)		
RB102	1-234-381-21	RES, NETWORK 100KX4	(1005)		
RB103	1-234-381-21	RES, NETWORK 100KX4	(1005)		
RB104	1-234-381-21	RES, NETWORK 100KX4	(1005)		
RB105	1-234-372-21	RES, NETWORK 100X4	(1005)		
RB106	1-234-378-21	RES, NETWORK 10KX4	(1005)		
RB107	1-234-370-21	RES, NETWORK 22X4	(1005)		
RB108	1-234-370-21	RES, NETWORK 22X4	(1005)		
RB109	1-234-370-21	RES, NETWORK 22X4	(1005)		
RB110	1-234-370-21	RES, NETWORK 22X4	(1005)		
RB111	1-234-370-21	RES, NETWORK 22X4	(1005)		
RB112	1-234-370-21	RES, NETWORK 22X4	(1005)		
RB113	1-234-378-21	RES, NETWORK 10KX4	(1005)		
RB114	1-234-378-21	RES, NETWORK 10KX4	(1005)		
RB115	1-234-378-21	RES, NETWORK 10KX4	(1005)		

REF.NO.	PART NO.	DESCRIPTION	VALUES
RB121	1-234-371-21	RES, NETWORK 47X4	(1005)
RB122	1-234-371-21	RES, NETWORK 47X4	(1005)
RB123	1-234-371-21	RES, NETWORK 47X4	(1005)
RB124	1-234-371-21	RES, NETWORK 47X4	(1005)
RB131	1-234-378-21	RES, NETWORK 10KX4	(1005)
RB132	1-234-378-21	RES, NETWORK 10KX4	(1005)
RB133	1-234-378-21	RES, NETWORK 10KX4	(1005)
RB134	1-234-378-21	RES, NETWORK 10KX4	(1005)
	CRYSTAL		
X101	1-795-725-21	CRYSTAL OSCILLATOR	(SMD)
X102	1-795-313-21	VIBRATOR, CERAMIC	

AD

The AD board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

*	**A-1300-887-A**	**AD BOARD, COMPLETE**	
	CAPACITOR		
C9401	1-126-933-11	ELECT	100µF 20% 16V
C9402	1-126-933-11	ELECT	100µF 20% 16V
C9403	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9404	1-162-919-11	CERAMIC CHIP	22pF 5% 50V
C9405	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9406	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9407	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9408	1-162-919-11	CERAMIC CHIP	22pF 5% 50V
C9409	1-126-933-11	ELECT	100µF 20% 16V
C9410	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9411	1-162-966-11	CERAMIC CHIP	0.0022µF 10% 50V
C9413	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9414	1-126-933-11	ELECT	100µF 20% 16V
C9415	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9416	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9419	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9422	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9424	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9425	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9426	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9427	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9428	1-126-933-11	ELECT	100µF 20% 16V
C9429	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9430	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9431	1-126-963-11	ELECT	4.7µF 20% 50V
C9432	1-107-826-11	CERAMIC CHIP	0.1µF 10% 16V
C9433	1-126-933-11	ELECT	100µF 20% 16V
C9434	1-126-933-11	ELECT	100µF 20% 16V
C9440	1-164-315-11	CERAMIC CHIP	470pF 5% 50V
C9441	1-164-315-11	CERAMIC CHIP	470pF 5% 50V
C9442	1-115-412-11	CERAMIC CHIP	680pF 5% 25V
C9444	1-115-412-11	CERAMIC CHIP	680pF 5% 25V
C9446	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9447	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9448	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9450	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9452	1-162-927-11	CERAMIC CHIP	100pF 5% 50V
C9453	1-162-927-11	CERAMIC CHIP	100pF 5% 50V
C9454	1-162-910-11	CERAMIC CHIP	5pF 0.25pF 50V
C9458	1-162-910-11	CERAMIC CHIP	5pF 0.25pF 50V
C9459	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9460	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9461	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9462	1-126-933-11	ELECT	100µF 20% 16V
C9463	1-126-933-11	ELECT	100µF 20% 16V
C9464	1-126-933-11	ELECT	100µF 20% 16V
C9465	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9466	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9467	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9468	1-164-315-11	CERAMIC CHIP	470pF 5% 50V
C9469	1-164-315-11	CERAMIC CHIP	470pF 5% 50V
C9470	1-115-412-11	CERAMIC CHIP	680pF 5% 25V
C9472	1-115-412-11	CERAMIC CHIP	680pF 5% 25V
C9474	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9475	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9476	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9478	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9480	1-162-927-11	CERAMIC CHIP	100pF 5% 50V
C9481	1-162-927-11	CERAMIC CHIP	100pF 5% 50V
C9482	1-162-910-11	CERAMIC CHIP	5pF 0.25pF 50V
C9483	1-162-910-11	CERAMIC CHIP	5pF 0.25pF 50V
C9484	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9485	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9486	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C9488	1-126-933-11	ELECT	100µF 20% 16V

REF.NO.	PART NO.	DESCRIPTION	VALUES		
C9489	1-126-933-11	ELECT	100µF	20%	16V
C9490	1-126-933-11	ELECT	100µF	20%	16V
C9491	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9492	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9493	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9494	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9495	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C9498	1-126-933-11	ELECT	100µF	20%	16V
C9501	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C9502	1-115-412-11	CERAMIC CHIP	680pF	5%	25V
C9503	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
C9505	1-115-412-11	CERAMIC CHIP	680pF	5%	25V
C9506	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9508	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9509	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9511	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C9512	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9514	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C9515	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C9516	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V
C9517	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9518	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9520	1-164-173-11	CERAMIC CHIP	0.0039µF	10%	50V
C9521	1-164-173-11	CERAMIC CHIP	0.0039µF	10%	50V
C9523	1-164-173-11	CERAMIC CHIP	0.0039µF	10%	50V
C9524	1-164-173-11	CERAMIC CHIP	0.0039µF	10%	50V
C9525	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9526	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9527	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9528	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9531	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9532	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9540	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9541	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9542	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9543	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9546	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9547	1-164-392-11	CERAMIC CHIP	390pF	5%	50V
C9548	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C9549	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C9550	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9552	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C9553	1-126-947-11	ELECT	47µF	20%	35V
C9554	1-126-947-11	ELECT	47µF	20%	35V
C9555	1-126-947-11	ELECT	47µF	20%	35V
C9556	1-126-916-11	ELECT	1000µF	20%	6.3V
C9557	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9558	1-126-933-11	ELECT	100µF	20%	16V
C9559	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9560	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9561	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C9562	1-126-935-11	ELECT	470µF	20%	16V

CONNECTOR

CN9400	1-764-613-11	CONNECTOR, BOARD TO BOARD	20P		
CN9401	1-764-613-11	CONNECTOR, BOARD TO BOARD	20P		
* CN9402	1-564-511-11	PLUG, CONNECTOR	8P		

DIODE

D9400	8-719-988-61	DIODE	1SS355TE-17
D9401	8-719-988-61	DIODE	1SS355TE-17
D9402	8-719-988-61	DIODE	1SS355TE-17
D9404	8-719-988-61	DIODE	1SS355TE-17
D9405	8-719-988-61	DIODE	1SS355TE-17
D9406	8-719-069-54	DIODE	UDZSTE-175.1B
D9407	8-719-069-54	DIODE	UDZSTE-175.1B
D9408	8-719-069-54	DIODE	UDZSTE-175.1B
D9409	8-719-069-54	DIODE	UDZSTE-175.1B

FERRITE BEAD

FB9401	1-414-445-11	FERRITE	0µH
FB9402	1-414-445-11	FERRITE	0µH
FB9403	1-414-445-11	FERRITE	0µH
FB9404	1-414-445-11	FERRITE	0µH
FB9405	1-414-445-11	FERRITE	0µH
FB9406	1-414-445-11	FERRITE	0µH
FB9407	1-414-445-11	FERRITE	0µH
FB9408	1-414-445-11	FERRITE	0µH
FB9409	1-414-445-11	FERRITE	0µH
FB9410	1-414-445-11	FERRITE	0µH
FB9411	1-414-445-11	FERRITE	0µH
FB9412	1-414-445-11	FERRITE	0µH
FB9413	1-414-445-11	FERRITE	0µH
FB9414	1-414-445-11	FERRITE	0µH
FB9415	1-414-445-11	FERRITE	0µH
FB9416	1-414-445-11	FERRITE	0µH
FB9417	1-414-445-11	FERRITE	0µH

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	IC				
IC9400	8-752-933-62	IC	CXP86460-647Q		
IC9401	8-759-683-55	IC	CM0017AF		
IC9402	6-700-319-01	IC	M24128-BWMN6T		
IC9403	8-759-352-91	IC	PST9143NL		
IC9405	8-759-830-08	IC	NJM2068V-TE2		
IC9406	8-759-830-08	IC	NJM2068V-TE2		
IC9407	8-759-829-87	IC	CD0031AM		
IC9408	8-759-830-08	IC	NJM2068V-TE2		
IC9409	8-759-830-08	IC	NJM2068V-TE2		
IC9410	8-759-830-08	IC	NJM2068V-TE2		
IC9411	8-759-830-08	IC	NJM2068V-TE2		
IC9413	8-759-278-58	IC	NJM4558V-TE2		
IC9414	8-759-278-58	IC	NJM4558V-TE2		
IC9415	8-759-278-58	IC	NJM4558V-TE2		
IC9416	8-759-278-58	IC	NJM4558V-TE2		
IC9420	8-759-830-08	IC	NJM2068V-TE2		
IC9421	8-759-662-86	IC	NJM79M05DL1A(TE2)		
IC9422	8-759-641-26	IC	NJM2391DL1-33(TE1)		
	COIL				
L9401	1-469-555-21	INDUCTOR	10µH		
	TRANSISTOR				
Q9400	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q9401	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q9402	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
Q9403	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9405	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9406	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9407	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9408	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9411	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9412	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9413	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9414	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9415	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q9416	8-729-028-28	TRANSISTOR	2SK2036(TE85L)		
Q9417	8-729-028-28	TRANSISTOR	2SK2036(TE85L)		
	RESISTOR				
R9400	1-216-841-11	METAL CHIP	47K	5%	1/10W
R9401	1-216-809-11	METAL CHIP	100	5%	1/10W
R9402	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9404	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9405	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9406	1-216-837-11	METAL CHIP	22K	5%	1/10W
R9407	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9408	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9410	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R9411	1-216-809-11	METAL CHIP	100	5%	1/10W
R9412	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R9413	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R9414	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R9415	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9416	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R9417	1-216-809-11	METAL CHIP	100	5%	1/10W
R9418	1-216-809-11	METAL CHIP	100	5%	1/10W
R9419	1-216-839-11	METAL CHIP	33K	5%	1/10W
R9420	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9421	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9422	1-216-818-11	METAL CHIP	560	5%	1/10W
R9423	1-216-809-11	METAL CHIP	100	5%	1/10W
R9424	1-216-809-11	METAL CHIP	100	5%	1/10W
R9425	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9426	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9428	1-216-809-11	METAL CHIP	100	5%	1/10W
R9429	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R9430	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9431	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R9432	1-216-815-11	METAL CHIP	330	5%	1/10W
R9433	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R9434	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9435	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R9436	1-216-809-11	METAL CHIP	100	5%	1/10W
R9437	1-216-809-11	METAL CHIP	100	5%	1/10W
R9438	1-216-815-11	METAL CHIP	330	5%	1/10W
R9439	1-216-815-11	METAL CHIP	330	5%	1/10W
R9440	1-216-817-11	METAL CHIP	470	5%	1/10W
R9441	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9442	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9443	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R9444	1-216-837-11	METAL CHIP	22K	5%	1/10W
R9446	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9447	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9448	1-216-818-11	METAL CHIP	560	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION	VALUES		
R9449	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R9450	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R9451	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9452	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9453	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9454	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9455	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9456	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9457	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9458	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9459	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R9460	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R9461	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R9462	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R9463	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R9464	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R9465	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R9466	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R9467	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9468	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9469	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9470	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9471	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R9472	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R9473	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R9474	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R9475	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R9476	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R9477	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R9478	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R9479	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9480	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9481	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9482	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R9483	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R9484	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R9485	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R9486	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R9487	1-218-724-11	METAL CHIP	22K	0.50%	1/10W
R9488	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R9489	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R9490	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R9494	1-216-855-11	METAL CHIP	680K	5%	1/10W
R9495	1-216-853-11	METAL CHIP	470K	5%	1/10W
R9496	1-216-853-11	METAL CHIP	470K	5%	1/10W
R9497	1-216-855-11	METAL CHIP	680K	5%	1/10W
R9502	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9503	1-216-845-11	METAL CHIP	100K	5%	1/10W
R9504	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9505	1-216-843-11	METAL CHIP	68K	5%	1/10W
R9509	1-216-843-11	METAL CHIP	68K	5%	1/10W
R9510	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9511	1-216-845-11	METAL CHIP	100K	5%	1/10W
R9512	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R9515	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9516	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9520	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9524	1-215-866-11	METAL OXIDE	330	5%	1W
R9527	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9539	1-218-706-11	METAL CHIP	3.9K	0.50%	1/10W
R9540	1-218-702-11	METAL CHIP	2.7K	0.50%	1/10W
R9541	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R9542	1-218-714-11	METAL CHIP	8.2K	0.50%	1/10W
R9545	1-216-839-11	METAL CHIP	33K	5%	1/10W
R9546	1-218-720-11	METAL CHIP	15K	0.50%	1/10W
R9548	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R9549	1-218-722-11	METAL CHIP	18K	0.50%	1/10W
R9550	1-216-837-11	METAL CHIP	22K	5%	1/10W
R9551	1-216-809-11	METAL CHIP	100	5%	1/10W
R9553	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9554	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9555	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9556	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9557	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9558	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9559	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9565	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9566	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9567	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9568	1-216-864-11	SHORT CHIP			
R9569	1-216-864-11	SHORT CHIP			
R9570	1-216-864-11	SHORT CHIP			
R9571	1-216-864-11	SHORT CHIP			
R9572	1-216-833-11	METAL CHIP	10K	5%	1/10W
R9573	1-216-833-11	METAL CHIP	10K	5%	1/10W

AD D

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REF.NO.	PART NO.	DESCRIPTION	VALUES		
R9574	1-216-797-11	METAL CHIP	10	5%	1/10W
R9575	1-216-797-11	METAL CHIP	10	5%	1/10W
		RESISTOR BRIDGE			
RB9400	1-233-576-11	RES, CHIP NETWORK	100		
RB9401	1-233-576-11	RES, CHIP NETWORK	100		
RB9402	1-233-576-11	RES, CHIP NETWORK	100		
		VARISTOR			
VD9404	1-804-499-21	VARISTOR, CHIP	(1608)		
VD9405	1-804-499-21	VARISTOR, CHIP	(1608)		
VD9406	1-804-499-21	VARISTOR, CHIP	(1608)		
VD9407	1-804-499-21	VARISTOR, CHIP	(1608)		
		CRYSTAL			
X9401	1-767-922-11	VIBRATOR, CERAMIC			

D

⚠	**A-1300-883-A**	**D BOARD COMPLETE**			
	The high-voltage leads associated with the FBT on this board are not included and must be ordered separately.				
⚠	1-779-095-51	LEAD ASSY, HIGH-VOLTAGE			
⚠	1-900-260-40	CONNECTOR ASSY, MV			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
	7-682-952-09	SCREW +PSW 3X16			
		CAPACITOR			
C8001	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C8002	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8003	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8004	1-104-666-11	ELECT	220µF	20%	25V
C8005	1-126-942-61	ELECT	1000µF	20%	25V
C8006	1-126-942-61	ELECT	1000µF	20%	25V
C8007	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8008	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8009	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8010	1-136-177-00	FILM	1µF	5%	50V
C8011	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8012	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8013	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8014	1-104-665-11	ELECT	100µF	20%	25V
C8015	1-126-969-11	ELECT	220µF	20%	50V

REF.NO.	PART NO.	DESCRIPTION	VALUES		
C8016	1-104-665-11	ELECT	100µF	20%	25V
C8017	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C8018	1-126-964-11	ELECT	10µF	20%	50V
C8019	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8020	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8023	1-106-220-00	MYLAR	0.1µF	10%	100V
C8024	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C8025	1-126-968-11	ELECT	100µF	20%	50V
C8026	1-126-968-11	ELECT	100µF	20%	50V
C8028	1-126-968-11	ELECT	100µF	20%	50V
C8029	1-126-968-11	ELECT	100µF	20%	50V
C8031	1-107-636-11	ELECT	10µF	20%	160V
C8032	1-126-968-11	ELECT	100µF	20%	50V
C8033	1-126-968-11	ELECT	100µF	20%	50V
C8034	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8035	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8036	1-126-968-11	ELECT	100µF	20%	50V
C8037	1-126-968-11	ELECT	100µF	20%	50V
C8040	1-115-349-51	CERAMIC	0.01µF		2KV
C8041	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8042	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8045	1-126-965-91	ELECT	22µF	20%	50V
C8046	1-126-965-91	ELECT	22µF	20%	50V
C8047	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8048	1-126-965-91	ELECT	22µF	20%	50V
C8049	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8050	1-126-965-91	ELECT	22µF	20%	50V
C8051	1-102-038-00	CERAMIC	0.001µF		500V
C8052	1-126-965-91	ELECT	22µF	20%	50V
C8053	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8054	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C8055	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C8056	1-107-652-11	ELECT	10µF	20%	250V
C8057	1-126-959-11	ELECT	0.47µF	20%	50V
C8058	1-164-230-11	CERAMIC CHIP	220pF	5%	50V
C8059	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C8060	1-104-665-11	ELECT	100µF	20%	25V
C8061	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8062	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8063	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8064	1-107-636-11	ELECT	10µF	20%	160V
C8065	1-106-383-00	MYLAR	0.047µF	10%	200V
C8066	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V

D

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REF.NO.	PART NO.	DESCRIPTION	VALUES		
C8067	1-104-665-11	ELECT	100µF	20%	25V
C8068	1-162-318-11	CERAMIC	0.001µF	10%	500V
C8069	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8070	1-126-964-11	ELECT	10µF	20%	50V
C8071	1-126-964-11	ELECT	10µF	20%	50V
C8072	1-126-964-11	ELECT	10µF	20%	50V
C8073	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8074	1-104-665-11	ELECT	100µF	20%	25V
C8075	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8076	1-128-551-11	ELECT	22µF	20%	63V
C8077	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8078	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C8079	1-126-964-11	ELECT	10µF	20%	50V
C8080	1-126-964-11	ELECT	10µF	20%	50V
C8081	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C8082	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
C8083	1-130-495-00	MYLAR	0.1µF	5%	50V
C8084	1-130-992-11	FILM	0.022µF	5%	50V
C8085	1-162-924-11	CERAMIC CHIP	56pF	5%	50V
C8086	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8087	1-126-960-11	ELECT	1µF	20%	50V
C8088	1-126-964-11	ELECT	10µF	20%	50V
C8089	1-162-134-11	CERAMIC	470pF	10%	2KV
C8090	1-126-960-11	ELECT	1µF	20%	50V
C8091	1-104-665-11	ELECT	100µF	20%	25V
C8092	1-117-640-11	FILM	6800pF	3%	1.2KV
C8093	1-107-648-91	ELECT	100µF	20%	200V
C8094	1-126-947-11	ELECT	47µF	20%	35V
C8095	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8096	1-136-684-51	FILM	0.0022µF	2.00%	100V
C8097	1-162-131-11	CERAMIC	220pF	10%	2KV
C8098	1-162-131-11	CERAMIC	220pF	10%	2KV
C8099	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V
C8100	1-104-665-11	ELECT	100µF	20%	25V
C8102	1-162-318-11	CERAMIC	0.001µF	10%	500V
C8103	1-126-964-11	ELECT	10µF	20%	50V
C8104	1-162-965-11	CERAMIC CHIP	0.0015µF	10%	50V
C8105	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8106	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8107	1-136-187-11	MYLAR	0.047µF	10%	250V
C8108	1-126-964-11	ELECT	10µF	20%	50V
C8109	1-162-924-11	CERAMIC CHIP	56pF	5%	50V
C8110	1-126-960-11	ELECT	1µF	20%	50V
C8111	1-126-960-11	ELECT	1µF	20%	50V
C8113	1-130-495-00	MYLAR	0.1µF	5%	50V
C8114	1-125-473-11	ELECT(BLOCK)	1000µF	20%	160V
C8115	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8116	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8117	1-162-318-11	CERAMIC	0.001µF	10%	500V
C8118	1-136-189-00	MYLAR	0.1µF	10%	250V
C8120	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8121	1-115-349-51	CERAMIC	0.01µF		2KV
C8122	1-126-934-11	ELECT	220µF	20%	16V
C8123	1-107-444-11	CERAMIC	100pF	5%	2KV
⚠ C8124	1-117-642-11	FILM	8200pF	3%	1.2KV
C8125	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8126	1-106-357-00	MYLAR	0.0039µF	99%	200V
C8127	1-126-942-61	ELECT	1000µF	20%	25V
C8129	1-137-150-11	FILM	0.01µF	5%	100V
C8131	1-128-582-11	ELECT	10µF	20%	100V
C8132	1-126-927-11	ELECT	2200µF	20%	10V
C8133	1-107-649-11	ELECT	2.2µF	20%	250V
C8135	1-117-813-11	FILM	0.75µF	5%	250V
C8136	1-130-495-00	MYLAR	0.1µF	5%	50V
C8137	1-126-927-11	ELECT	2200µF	20%	10V
C8138	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C8139	1-126-964-11	ELECT	10µF	20%	50V
C8140	1-102-030-00	CERAMIC	330pF	10%	500V
C8141	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C8142	1-117-664-11	FILM	0.27µF	5%	250V
C8143	1-109-889-11	ELECT	1µF	20%	50V
C8145	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8146	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C8153	1-126-960-11	ELECT	1µF	20%	50V
C8154	1-126-947-11	ELECT	47µF	20%	35V
C8155	1-126-947-11	ELECT	47µF	20%	35V
C8156	1-107-636-11	ELECT	10µF	20%	160V
C8158	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C8159	1-106-383-00	MYLAR	0.047µF	10%	200V
C8160	1-127-715-91	CERAMIC CHIP	0.22µF	10%	16V
C8162	1-162-318-11	CERAMIC	0.001µF	10%	500V
C8163	1-126-960-11	ELECT	1µF	20%	50V
C8165	1-126-965-91	ELECT	22µF	20%	50V

	REF.NO.	PART NO.	DESCRIPTION	VALUES
		CONNECTOR		
*	CN8003	1-691-135-11	PIN, CONNECTOR (PC BOARD)	4P
*	CN8006	1-564-506-11	PLUG, CONNECTOR	3P
*	CN8007	1-564-506-11	PLUG, CONNECTOR	3P
*	CN8008	1-564-506-11	PLUG, CONNECTOR	3P
*	CN8009	1-564-506-11	PLUG, CONNECTOR	3P
*	CN8010	1-564-507-11	PLUG, CONNECTOR	4P
*	CN8011	1-564-507-11	PLUG, CONNECTOR	4P
*	CN8012	1-564-507-11	PLUG, CONNECTOR	4P
	CN8013	1-779-092-11	PIN, CONNECTOR (PC BOARD)	10P
*	CN8015	1-506-371-00	PIN, CONNECTOR	2P
*	CN8016	1-564-507-11	PLUG, CONNECTOR	4P
*	CN8018	1-580-689-11	PIN, CONNECTOR (PC BOARD)	4P
*	CN8019	1-580-689-11	PIN, CONNECTOR (PC BOARD)	4P
*	CN8020	1-580-689-11	PIN, CONNECTOR (PC BOARD)	4P
*	CN8022	1-564-510-11	PLUG, CONNECTOR	7P
*	CN8023	1-564-507-11	PLUG, CONNECTOR	4P
*	CN8025	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P
	CN8026	1-764-611-11	CONNECTOR, BOARD TO BOARD	20P
	CN8027	1-764-611-11	CONNECTOR, BOARD TO BOARD	20P
*	CN8028	1-564-507-11	PLUG, CONNECTOR	4P
*	CN8029	1-564-510-11	PLUG, CONNECTOR	7P
*	CN8030	1-564-510-11	PLUG, CONNECTOR	7P
*	CN8031	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P
		DIODE		
	D8001	8-719-109-89	DIODE	RD5.6ESB2
	D8002	8-719-110-53	DIODE	RD20ESB2
	D8003	8-719-924-13	DIODE	MTZJ-T-77-22B
	D8004	8-719-908-03	DIODE	GP08D
	D8005	8-719-988-61	DIODE	1SS355TE-17
	D8006	8-719-988-61	DIODE	1SS355TE-17
	D8008	8-719-988-61	DIODE	1SS355TE-17
	D8010	8-719-988-61	DIODE	1SS355TE-17
	D8011	8-719-988-61	DIODE	1SS355TE-17
	D8012	8-719-988-61	DIODE	1SS355TE-17
	D8013	8-719-109-85	DIODE	RD5.1ESB2
	D8014	8-719-109-85	DIODE	RD5.1ESB2
	D8015	8-719-988-61	DIODE	1SS355TE-17
	D8016	8-719-988-61	DIODE	1SS355TE-17
	D8019	8-719-988-61	DIODE	1SS355TE-17
	D8020	8-719-988-61	DIODE	1SS355TE-17
	D8022	8-719-988-61	DIODE	1SS355TE-17
	D8023	8-719-988-61	DIODE	1SS355TE-17
	D8024	8-719-110-41	DIODE	RD15ESB2
	D8025	8-719-988-61	DIODE	1SS355TE-17
	D8026	8-719-109-89	DIODE	RD5.6ESB2
	D8027	8-719-028-45	DIODE	D2L20U
	D8028	8-719-110-41	DIODE	RD15ESB2
	D8029	8-719-027-43	DIODE	S2L20μF
	D8030	8-719-027-43	DIODE	S2L20μF
	D8032	8-719-302-43	DIODE	EL1Z
	D8033	8-719-028-72	DIODE	RGP02-17EL-6433
	D8036	8-719-110-41	DIODE	RD15ESB2
	D8037	8-719-028-45	DIODE	D2L20U
	D8038	8-719-302-43	DIODE	EL1Z
	D8039	8-719-028-72	DIODE	RGP02-17EL-6433
	D8042	8-719-988-61	DIODE	1SS355TE-17
	D8043	8-719-988-61	DIODE	1SS355TE-17
	D8045	8-719-908-03	DIODE	GP08D
	D8047	8-719-988-61	DIODE	1SS355TE-17
	D8050	8-719-988-61	DIODE	1SS355TE-17
	D8051	8-719-988-61	DIODE	1SS355TE-17
	D8052	8-719-988-61	DIODE	1SS355TE-17
		FERRITE BEAD		
	FB8001	1-469-578-11	FERRITE	1.1μH
	FB8002	1-469-578-11	FERRITE	1.1μH
	FB8005	1-469-869-21	FERRITE	0μH
	FB8006	1-469-869-21	FERRITE	0μH
	FB8014	1-469-869-21	FERRITE	0μH
	FB8015	1-469-869-21	FERRITE	0μH
	FB8016	1-469-869-21	FERRITE	0μH
	FB8017	1-469-869-21	FERRITE	0μH
	FB8018	1-469-869-21	FERRITE	0μH
	FB8021	1-469-578-11	FERRITE	1.1μH
	FB8022	1-469-579-11	FERRITE	0.45μH
	FB8023	1-469-579-11	FERRITE	0.45μH
		IC		
	IC8001	8-749-019-08	IC	STK392-560
	IC8002	8-749-019-08	IC	STK392-560
	IC8003	8-759-593-33	IC	LA78045
	IC8004	8-759-701-79	IC	NJM7812FA
	IC8005	8-759-585-82	IC	BA9759F-E2
	IC8006	8-759-700-07	IC	NJM2903M
	IC8007	8-759-700-07	IC	NJM2903M
	IC8008	8-759-585-82	IC	BA9759F-E2

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REF.NO.	PART NO.	DESCRIPTION	VALUES
IC8009	8-759-803-42	IC	LA6500-FA
IC8010	8-759-471-81	IC	PQ05RD11
IC8012	8-759-701-01	IC	NJM2904M
	COIL		
L8001	1-412-533-21	INDUCTOR	47µH
L8002	1-412-533-21	INDUCTOR	47µH
L8003	1-412-525-31	INDUCTOR	10µH
L8004	1-412-533-21	INDUCTOR	47µH
L8005	1-412-533-21	INDUCTOR	47µH
L8006	1-412-525-31	INDUCTOR	10µH
L8007	1-412-533-21	INDUCTOR	47µH
L8008	1-412-533-21	INDUCTOR	47µH
L8009	1-412-525-31	INDUCTOR	10µH
L8010	1-414-187-11	INDUCTOR	47µH
L8011	1-414-856-11	INDUCTOR	10µH
L8012	1-414-187-11	INDUCTOR	47µH
L8013	1-414-856-11	INDUCTOR	10µH
L8014	1-414-189-31	INDUCTOR	100µH
L8015	1-414-189-31	INDUCTOR	100µH
L8016	1-412-537-31	INDUCTOR	100µH
L8017	1-414-856-11	INDUCTOR	10µH
L8018	1-406-667-11	INDUCTOR	220µH
L8019	1-456-109-11	COIL,HORIZONTAL LINEARITY(HLC)	
L8020	1-412-525-31	INDUCTOR	10µH
L8021	1-406-659-11	INDUCTOR	10µH
L8022	1-412-552-11	INDUCTOR	2.2MH
L8025	1-414-856-11	INDUCTOR	10µH
L8026	1-414-856-11	INDUCTOR	10µH
L8028	1-414-187-11	INDUCTOR	47µH
L8029	1-414-187-11	INDUCTOR	47µH
L8030	1-414-187-11	INDUCTOR	47µH
L8031	1-414-187-11	INDUCTOR	47µH
L8032	1-414-856-11	INDUCTOR	10µH
L8033	1-414-856-11	INDUCTOR	10µH
	NEON LAMP		
NL8001	1-517-778-21	LAMP, NEON	
	IC LINK		
⚠ PS8001	1-533-595-31	IC LINK	3.15A 90V
⚠ PS8002	1-533-595-31	IC LINK	3.15A 90V
⚠ PS8003	1-533-595-31	IC LINK	3.15A 90V
⚠ PS8004	1-533-595-31	IC LINK	3.15A 90V
⚠ PS8005	1-533-595-31	IC LINK	3.15A 90V
⚠ PS8006	1-533-595-31	IC LINK	3.15A 90V
⚠ PS8007	1-533-594-31	IC LINK	2.5A 90V
PS8008	1-532-685-00	IC LINK	0.8A 50V
	TRANSISTOR		
Q8001	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8002	8-729-046-80	TRANSISTOR	2SC4634LS-CB11
Q8003	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q8004	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q8007	8-729-046-80	TRANSISTOR	2SC4634LS-CB11
Q8008	8-729-207-89	TRANSISTOR	2SA1358-Y
Q8009	8-729-207-82	TRANSISTOR	2SC3421-Y
Q8010	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8011	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q8014	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8015	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8016	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8019	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q8020	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8021	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8022	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8023	8-729-048-47	TRANSISTOR	2SC2688(5)-LK
Q8024	6-550-144-01	TRANSISTOR	2SC5778-YB
Q8027	6-550-153-01	TRANSISTOR	FQpF12P20XDTU
Q8028	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8029	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8030	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q8031	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8035	6-550-153-01	TRANSISTOR	FQpF12P20XDTU
Q8039	8-729-048-47	TRANSISTOR	2SC2688(5)-LK
Q8041	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q8042	8-729-048-47	TRANSISTOR	2SC2688(5)-LK
Q8043	6-550-144-01	TRANSISTOR	2SC5778-YB
Q8044	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q8101	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
	RESISTOR		
R8001	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R8002	1-216-809-11	METAL CHIP	100 5% 1/10W
R8003	1-216-809-11	METAL CHIP	100 5% 1/10W
R8004	1-216-809-11	METAL CHIP	100 5% 1/10W
R8005	1-215-875-11	METAL OXIDE	10K 5% 1W

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REF.NO.	PART NO.	DESCRIPTION	VALUES		
R8007	1-216-809-11	METAL CHIP	100	5%	1/10W
R8008	1-216-809-11	METAL CHIP	100	5%	1/10W
R8009	1-216-809-11	METAL CHIP	100	5%	1/10W
R8010	1-260-131-11	CARBON	470K	5%	1/2W
R8011	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8012	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8013	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R8014	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R8015	1-216-837-11	METAL CHIP	22K	5%	1/10W
R8016	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8017	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8018	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8019	1-218-712-11	METAL CHIP	6.8K	0.50%	1/10W
R8020	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
⚠ R8021	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8022	1-216-839-11	METAL CHIP	33K	5%	1/10W
R8023	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8024	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8025	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8026	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8029	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8030	1-215-903-11	METAL OXIDE	68K	5%	2W
R8031	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8032	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8033	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8034	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8035	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R8036	1-214-800-11	METAL	2.2	1%	1/2W
R8037	1-215-903-11	METAL OXIDE	68K	5%	2W
R8038	1-216-809-11	METAL CHIP	100	5%	1/10W
R8039	1-214-800-11	METAL	2.2	1%	1/2W
R8040	1-215-913-11	METAL OXIDE	220	5%	3W
R8041	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R8042	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R8043	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8044	1-218-712-11	METAL CHIP	6.8K	0.50%	1/10W
R8045	1-214-808-11	METAL	4.7	1%	1/2W
R8046	1-214-808-11	METAL	4.7	1%	1/2W
R8047	1-215-857-71	METAL OXIDE	10	5%	1W
R8048	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8050	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8051	1-214-808-11	METAL	4.7	1%	1/2W
R8053	1-214-808-11	METAL	4.7	1%	1/2W

REF.NO.	PART NO.	DESCRIPTION	VALUES		
R8055	1-218-748-11	METAL CHIP	220K	0.50%	1/10W
R8056	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8057	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8058	1-216-809-11	METAL CHIP	100	5%	1/10W
R8059	1-214-808-11	METAL	4.7	1%	1/2W
R8060	1-214-808-11	METAL	4.7	1%	1/2W
R8061	1-216-392-11	METAL OXIDE	1.8	5%	3W
R8062	1-260-107-11	CARBON	4.7K	5%	1/2W
R8063	1-214-808-11	METAL	4.7	1%	1/2W
R8064	1-214-808-11	METAL	4.7	1%	1/2W
R8065	1-260-328-11	CARBON	1K	5%	1/2W
R8066	1-214-808-11	METAL	4.7	1%	1/2W
R8067	1-214-808-11	METAL	4.7	1%	1/2W
R8068	1-216-809-11	METAL CHIP	100	5%	1/10W
R8069	1-214-808-11	METAL	4.7	1%	1/2W
R8070	1-214-808-11	METAL	4.7	1%	1/2W
R8071	1-215-381-00	METAL	22	1%	1/4W
R8073	1-214-808-11	METAL	4.7	1%	1/2W
R8075	1-214-808-11	METAL	4.7	1%	1/2W
R8076	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8077	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8078	1-214-808-11	METAL	4.7	1%	1/2W
R8079	1-214-808-11	METAL	4.7	1%	1/2W
R8080	1-216-353-00	METAL OXIDE	2.2	5%	1W
R8081	1-214-808-11	METAL	4.7	1%	1/2W
R8082	1-214-808-11	METAL	4.7	1%	1/2W
R8083	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8084	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8085	1-214-808-11	METAL	4.7	1%	1/2W
R8086	1-214-808-11	METAL	4.7	1%	1/2W
⚠ R8087	1-249-385-11	CARBON	2.2	5%	1/4W
⚠ R8088	1-249-385-11	CARBON	2.2	5%	1/4W
R8089	1-214-808-11	METAL	4.7	1%	1/2W
R8090	1-214-808-11	METAL	4.7	1%	1/2W
R8091	1-214-808-11	METAL	4.7	1%	1/2W
R8092	1-214-808-11	METAL	4.7	1%	1/2W
R8093	1-214-808-11	METAL	4.7	1%	1/2W
R8094	1-214-808-11	METAL	4.7	1%	1/2W
R8095	1-216-801-11	METAL CHIP	22	5%	1/10W
R8096	1-216-801-11	METAL CHIP	22	5%	1/10W
R8097	1-214-808-11	METAL	4.7	1%	1/2W
R8098	1-214-808-11	METAL	4.7	1%	1/2W

D

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	VALUES		
R8100	1-216-475-11	METAL OXIDE	120	5%	3W
R8101	1-216-475-11	METAL OXIDE	120	5%	3W
R8102	1-218-734-11	METAL CHIP	56K	0.50%	1/10W
R8103	1-216-816-11	METAL CHIP	390	5%	1/10W
R8104	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R8105	1-214-808-11	METAL	4.7	1%	1/2W
R8106	1-214-808-11	METAL	4.7	1%	1/2W
R8109	1-216-813-11	METAL CHIP	220	5%	1/10W
R8110	1-249-424-11	CARBON	3.9K	5%	1/4W
R8111	1-216-819-11	METAL CHIP	680	5%	1/10W
R8112	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
R8113	1-216-475-11	METAL OXIDE	120	5%	3W
R8114	1-216-475-11	METAL OXIDE	120	5%	3W
R8115	1-216-475-11	METAL OXIDE	120	5%	3W
R8116	1-216-475-11	METAL OXIDE	120	5%	3W
R8117	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8118	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8119	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8120	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8121	1-216-809-11	METAL CHIP	100	5%	1/10W
R8123	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8124	1-249-377-11	CARBON	0.47	5%	1/4W
R8125	1-216-816-11	METAL CHIP	390	5%	1/10W
R8126	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R8127	1-216-341-11	METAL OXIDE	0.22	5%	1W
R8128	1-216-845-11	METAL CHIP	100K	5%	1/10W
R8129	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R8130	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R8131	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8132	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8133	1-215-923-00	METAL OXIDE	10K	5%	3W
R8134	1-215-873-00	METAL OXIDE	4.7K	5%	1W
R8135	1-215-923-00	METAL OXIDE	10K	5%	3W
R8136	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8137	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8138	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8139	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R8140	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8141	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R8142	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8143	1-218-734-11	METAL CHIP	56K	0.50%	1/10W
R8144	1-216-809-11	METAL CHIP	100	5%	1/10W
R8145	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R8146	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R8147	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
R8148	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8149	1-249-401-11	CARBON	47	5%	1/4W
R8150	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8151	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R8152	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R8153	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R8154	1-218-728-11	METAL CHIP	33K	0.50%	1/10W
R8155	1-215-469-00	METAL	100K	1%	1/4W
R8156	1-215-469-00	METAL	100K	1%	1/4W
R8157	1-218-738-11	METAL CHIP	82K	0.50%	1/10W
R8159	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8161	1-216-845-11	METAL CHIP	100K	5%	1/10W
R8162	1-249-377-11	CARBON	0.47	5%	1/4W
R8163	1-216-845-11	METAL CHIP	100K	5%	1/10W
R8164	1-218-734-11	METAL CHIP	56K	0.50%	1/10W
R8165	1-249-425-11	CARBON	4.7K	5%	1/4W
R8166	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R8168	1-216-809-11	METAL CHIP	100	5%	1/10W
R8169	1-216-845-11	METAL CHIP	100K	5%	1/10W
R8170	1-218-712-11	METAL CHIP	6.8K	0.50%	1/10W
R8171	1-216-809-11	METAL CHIP	100	5%	1/10W
⚠ R8172	1-249-405-11	CARBON	100	5%	1/4W
R8173	1-216-845-11	METAL CHIP	100K	5%	1/10W
R8174	1-249-425-11	CARBON	4.7K	5%	1/4W
R8176	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8178	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8180	1-216-845-11	METAL CHIP	100K	5%	1/10W
R8181	1-216-845-11	METAL CHIP	100K	5%	1/10W
R8182	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8183	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8189	1-249-377-11	CARBON	0.47	5%	1/4W
R8190	1-215-429-00	METAL	2.2K	1%	1/4W
R8191	1-215-415-00	METAL	560	1%	1/4W
R8192	1-215-445-00	METAL	10K	1%	1/4W
R8193	1-215-445-00	METAL	10K	1%	1/4W
R8194	1-215-445-00	METAL	10K	1%	1/4W
R8195	1-215-445-00	METAL	10K	1%	1/4W
R8196	1-249-425-11	CARBON	4.7K	5%	1/4W
R8198	1-215-445-00	METAL	10K	1%	1/4W
R8201	1-249-397-11	CARBON	22	5%	1/4W

D

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

A component identified by this ⋈ symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION	VALUES		
R8202	1-260-092-11	CARBON	270	5%	1/2W
⚠ R8205	1-249-377-11	CARBON	0.47	5%	1/4W
R8206	1-249-377-11	CARBON	0.47	5%	1/4W
R8208	1-260-288-11	CARBON	0.47	5%	1/2W
R8209	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8210	1-216-809-11	METAL CHIP	100	5%	1/10W
R8211	1-215-906-11	METAL OXIDE	15	5%	3W
R8212	1-215-907-11	METAL OXIDE	22	5%	3W
R8213	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8216	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8217	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8218	1-260-123-11	CARBON	100K	5%	1/2W
⚠ R8219	1-249-377-11	CARBON	0.47	5%	1/4W
R8220	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8222	1-216-341-11	METAL OXIDE	0.22	5%	1W
R8223	1-218-752-11	METAL CHIP	330K	0.50%	1/10W
R8224	1-260-127-11	CARBON	220K	5%	1/2W
⚠ R8225	1-260-292-11	CARBON	1	5%	1/2W
⚠ R8228	1-260-314-11	CARBON	68	5%	1/2W
R8230	1-218-751-11	METAL CHIP	300K	0.50%	1/10W
R8232	1-216-809-11	METAL CHIP	100	5%	1/10W
R8233	1-216-809-11	METAL CHIP	100	5%	1/10W
R8234	1-216-809-11	METAL CHIP	100	5%	1/10W
R8235	1-216-809-11	METAL CHIP	100	5%	1/10W
R8236	1-218-917-11	METAL CHIP	820K	0.50%	1/10W
R8237	1-216-857-11	METAL CHIP	1M	5%	1/10W
R8242	1-216-864-11	SHORT CHIP			
R8243	1-216-809-11	METAL CHIP	100	5%	1/10W
R8249	1-215-923-00	METAL OXIDE	10K	5%	3W
R8250	1-215-923-00	METAL OXIDE	10K	5%	3W
R8251	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8253	1-216-816-11	METAL CHIP	390	5%	1/10W
R8254	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R8255	1-215-873-00	METAL OXIDE	4.7K	5%	1W
R8256	1-249-401-11	CARBON	47	5%	1/4W
R8258	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8259	1-216-809-11	METAL CHIP	100	5%	1/10W
R8260	1-216-845-11	METAL CHIP	100K	5%	1/10W
R8261	1-216-845-11	METAL CHIP	100K	5%	1/10W
R8262	1-216-845-11	METAL CHIP	100K	5%	1/10W
R8263	1-216-845-11	METAL CHIP	100K	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION	VALUES
	TRANSFORMER		
T8001	1-437-708-11	TRANSFORMER, FERRITE (DFT)	
T8002	1-437-739-11	TRANSFORMER, FERRITE (HDT)	
T8003	1-437-401-11	TRANSFORMER, FERRITE (HOT)	
⚠ T8004	1-437-399-21	TRANSFORMER, FERRITE (LOT)	
⚠ T8005	1-453-285-51	FBT ASSY NX-4006//X4P4	
T8006	1-437-739-11	TRANSFORMER, FERRITE (HDT)	
	THERMISTOR		
TH8001	1-800-193-00	THERMISTOR	
	VARIABLE RESISTOR		
⋈⚠ VR8001	1-225-627-91	RES, VAR, ADJ, CERMET 2K	
⋈⚠ VR8002	1-225-630-91	RES, VAR, ADJ, CERMET 20K	

SR

REF. NO.	PART NO.	DESCRIPTION	VALUES

SR

The SR board is not field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.

*	**A-1400-759-A**	**SR BOARD, MOUNTED**	
		CONNECTOR	
*	CN9901	1-564-506-11	PLUG,CONNECTOR 3P
		DIODE	
	D9902	8-719-069-55	DIODE UDZSTE-175.6B
		BATTERY	
	SB9901	1-756-295-11	BATTERY, SOLAR

REF. NO.	PART NO.	DESCRIPTION
		ACCESSORIES AND PACKING
	1-796-426-11	CD-ROM
*	4-042-463-01	SHEET, PROTECTION
*	4-076-420-01	BAG, PROTECTION
	4-088-026-11	MANUAL, INSTRUCTION
	4-088-026-21	MANUAL, INSTRUCTION (KP-57WV700/65WV700 ONLY)
	4-088-026-31	MANUAL, INSTRUCTION (KP-65WV700 ONLY)
*	4-088-440-01	CUSHION, UPPER (KP-57WV600/57WV700 ONLY)
*	4-088-441-01	CUSHION, LOWER (KP-57WV700 ONLY)
*	4-088-444-01	CUSHION, LOWER (KP-57WV600 ONLY)
*	4-088-445-01	CUSHION, UPPER (KP-65WV600/65WV700 ONLY)
*	4-088-446-01	CUSHION, LOWER (KP-65WV600/65WV700 ONLY)
* ☛	4-088-442-02	INDIVIDUAL, CARTON (KP-57WV600/57WV700 ONLY)
* ☛	4-088-447-02	INDIVIDUAL, CARTON (KP-65WV600/65WV700 ONLY)
*	4-088-443-01	TRAY (KP-57WV600/57WV700 ONLY)
*	4-088-448-01	TRAY (KP-65WV600/65WV700 ONLY)
	1-468-681-11	REMOTE COMMANDER RM-Y188
	4-081-888-01	BATTERY COVER (for RM-Y188)

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SERVICE MANUAL DA-4X CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-57WV600	*RM-Y188*	*US/CND*	*SCC-P92D-A*
KP-57WV700	*RM-Y188*	*US/CND*	*SCC-P92B-A*
KP-65WV600	*RM-Y188*	*US/CND*	*SCC-P92C-A*
KP-65WV700	*RM-Y188*	*US/CND*	*SCC-P92A-A*

CORRECTION - 3

SUBJECT: CONVERGENCE ADJUSTMENT PROCEDURE

Correct the service manual as shown.
File this Correction with the service manual.

☛ : Corrected Item

Section 2: Set Up Adjustments
2-12 Registration Adjustment (PJE Mode Only) (Page 48)
2-13-2 Copying All Registration Data to Other Modes (Page 52)

COLOR REAR VIDEO PROJECTOR

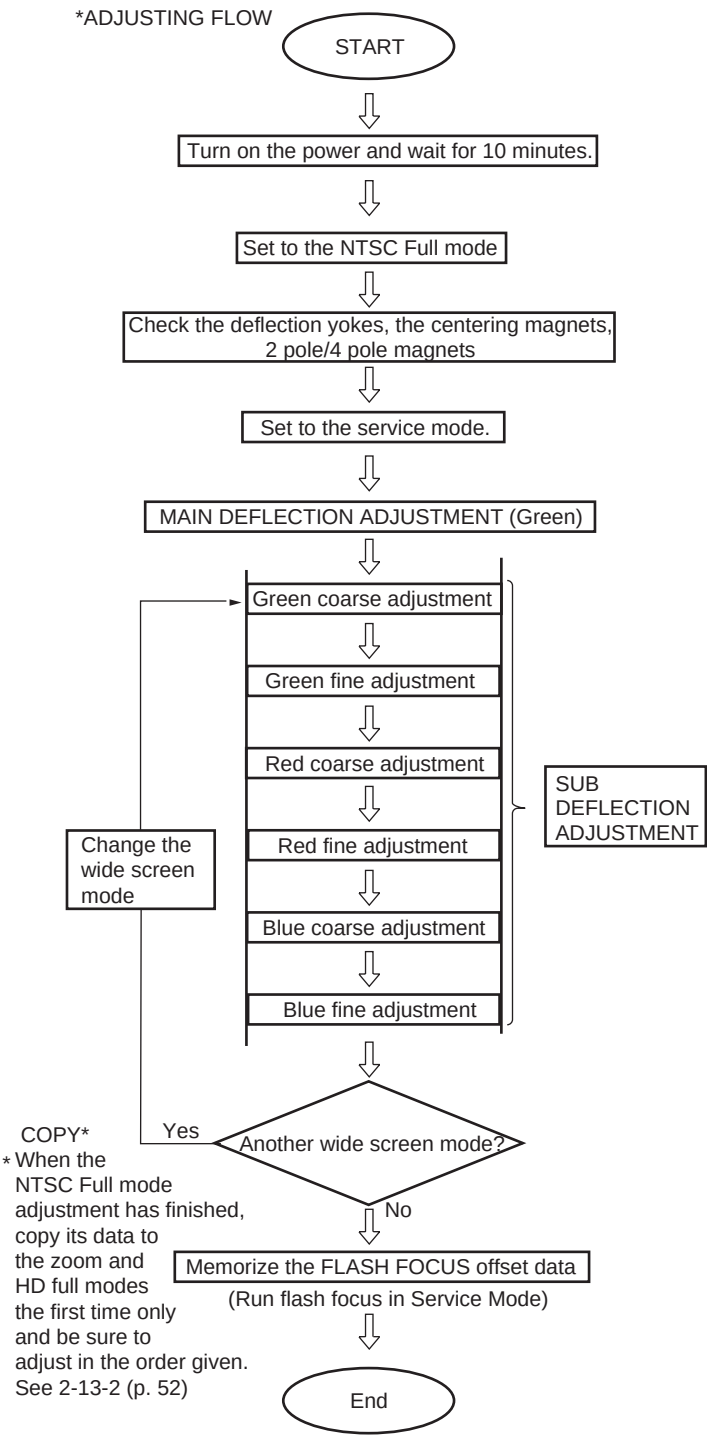
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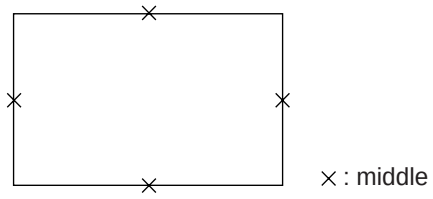
2-12. REGISTRATION ADJUSTMENT (PJE MODE ONLY)



2-12-1. SETUP FOR ADJUSTMENT

MARKING

- At the 4 sides of the screen, locate the middle. Use a tape measure to identify the middle.



DATA SETTING

1. Set NTSC Full mode.
2. Enter the service mode, and select “PJE”.

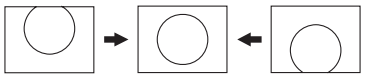
NOTE: When you replace printed circuit boards or devices or CRTs, and when correction is drastically necessary, press the “7” + ENTER on the remote commander to initialize the data in the Projector Engine mode. Press the MUTING + ENTER on the remote commander to write the data.

2-12-2. MAIN DEFLECTION ADJUSTMENT

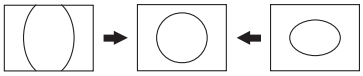
NOTE: Before this adjustment, refer to section 2-11 for PJE item #78-85 input data.

1. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
2. Enter the monoscope signal and set to NTSC Full mode.
3. Enter the service mode, and select “2170D-1”.
4. Adjust “0 VPOS” and “1 VSIZ” so that the picture is displayed in the center of the screen.
5. Adjust “2VSZ0” for 1080i vertical size adjustment.

0 VPOS



1 V-Size

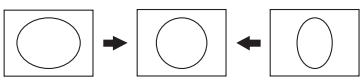


6. Select “2170D-2” and adjust “2 H-Size” so that the picture size is within the specification.

SPEC Overscan Spec. = 9%

Input Signal	H SIZE	V SIZE
Monoscope	15.6 ± 0.2 sq.	11.5 ± 0.2 sq.

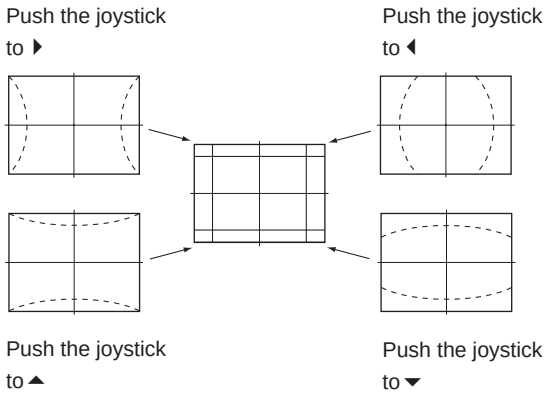
2 H-Size



7. Copy the data of the NTSC Full mode to the other wide screen mode and, if necessary, adjust in the other mode.

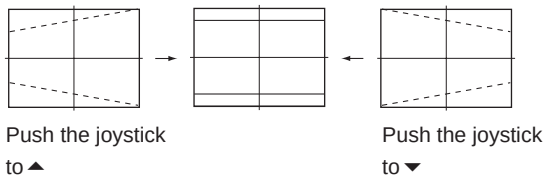
12. Select “GRN PIN”, and adjust so that right and left vertical lines on the screen become straight. Adjust so that upper and lower horizontal lines on the screen become straight.

GRN PIN (Horizontally/Vertically)



13. Select “GRN KEY”, and adjust so that upper and lower horizontal lines on the screen become parallel.

GRN KEY (Vertically)



Note: The VPIN and KEY adjustments affect each other.
If necessary, adjust these mutually.

14. Press the “9” button on the remote commander to enter fine adjustment mode.
15. Make the fine adjustment so that horizontal lines and vertical lines become straight.
16. Press the “9” button on the remote commander to return to coarse adjustment mode.

2) RED ADJUSTMENT

1. Cover the blue CRT lens with a lens caps to allow only the green and red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
2. Press the “3” button on the remote commander to select RED mode.
3. Adjust the following items so that red lines overlap with green lines.
   - RED CENT (horizontally/vertically)
   - RED SKEW (horizontally/vertically)
   - RED SIZE (horizontally/vertically)
   - RED LIN (horizontally/vertically)
   - RED MSIZ (horizontally)
   - RED MLIN (horizontally)
   - RED PIN (horizontally/vertically)
   - RED KEY (vertically)
4. Press the “9” button on the remote commander to enter fine adjustment mode.
5. Make the fine adjustment so that horizontal lines and vertical lines overlap with green lines.
6. Press the “9” button on the remote commander to return to coarse adjustment mode.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2170P-2 1 RGBS.

3) BLUE ADJUSTMENT

1. Remove the lens cap from the blue picture lens to display all colors.
2. Press the “3” button on the remote commander to select BLU mode.
3. Adjust the following items so that blue lines overlap with green lines.
   - BLU CENT (horizontally/vertically)
   - BLU SKEW (horizontally/vertically)
   - BLU SIZE (horizontally/vertically)
   - BLU LIN (horizontally/vertically)
   - BLU PIN (horizontally/vertically)
   - BLU KEY (vertically)
4. Press the “9” button on the remote commander to enter fine adjustment mode.
5. Make the fine adjustment so that horizontal lines and vertical lines overlap with green and red lines.
6. Press the “9” button on the remote commander to return `to coarse adjustment mode.

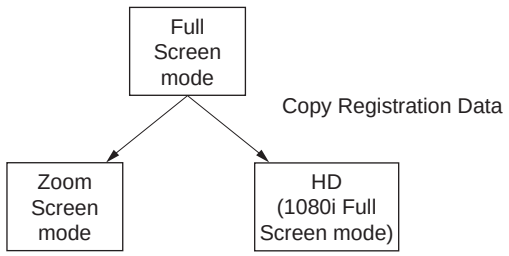
Note: When replacing CRTs, adjust the set-up adjustments (2-1 to 2-9) and the registration adjustment (2-12). When replacing multiple CRTs at the same time, replace and adjust them individually.

4) REGISTRATION DATA WRITING

1. After completing each adjustment of green, blue, and red for the NTSC Full mode press the “MUTING”+ “ENTER” buttons on the remote commander to write the registration data to the NVM.

2-13-2.COPYING ALL REGISTRATION DATA TO OTHER MODES

1. Make sure that the adjustment for NTSC Full mode are complete and the data have already been written.
2. Select the PJE mode.
3. Select COPY and set the data to “01”, and press the “MUTING”+“ENTER” buttons on the remote commander.
4. The data from the NTSC Full mode is copied to zoom and HD full modes.



5. Check in the other modes and adjust as demands.
   Be sure to write data in each mode.
   Adjustment for wide zoom mode should be done separately.

SERVICE MANUAL

DA-4X CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-57WV600	*RM-Y188*	*US/CND*	*SCC-P92D-A*
KP-57WV700	*RM-Y188*	*US/CND*	*SCC-P92B-A*
KP-65WV600	*RM-Y188*	*US/CND*	*SCC-P92C-A*
KP-65WV700	*RM-Y188*	*US/CND*	*SCC-P92A-A*

CORRECTION- 4

SUBJECT: EXPLODED VIEW CHASSIS PART NUMBER

Correct the service manual as shown.
File this Correction with the service manual.

☛ : Corrected Item

Section 6: Exploded View
6-3. CHASSIS (Page 109)

INCORRECT

REF. NO.	PART NO.	DESCRIPTION
77	3-184-556-01	CASTER

CORRECT

	REF. NO.	PART NO.	DESCRIPTION
☛	77	4-061-174-01	CASTER

COLOR REAR VIDEO PROJECTOR

SONY®

Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

English
2003AJ74WEB-1
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9-965-926-94

SERVICE MANUAL — DA-4X CHASSIS

MODEL NAME	REMOTE COMMANDER	DESTINATION	CHASSIS NO.
KP-57WV600	*RM-Y188*	*US/CND*	*SCC-P92D-A*
KP-57WV700	*RM-Y188*	*US/CND*	*SCC-P92B-A*
KP-65WV600	*RM-Y188*	*US/CND*	*SCC-P92C-A*
KP-65WV700	*RM-Y188*	*US/CND*	*SCC-P92A-A*

CORRECTION- 5

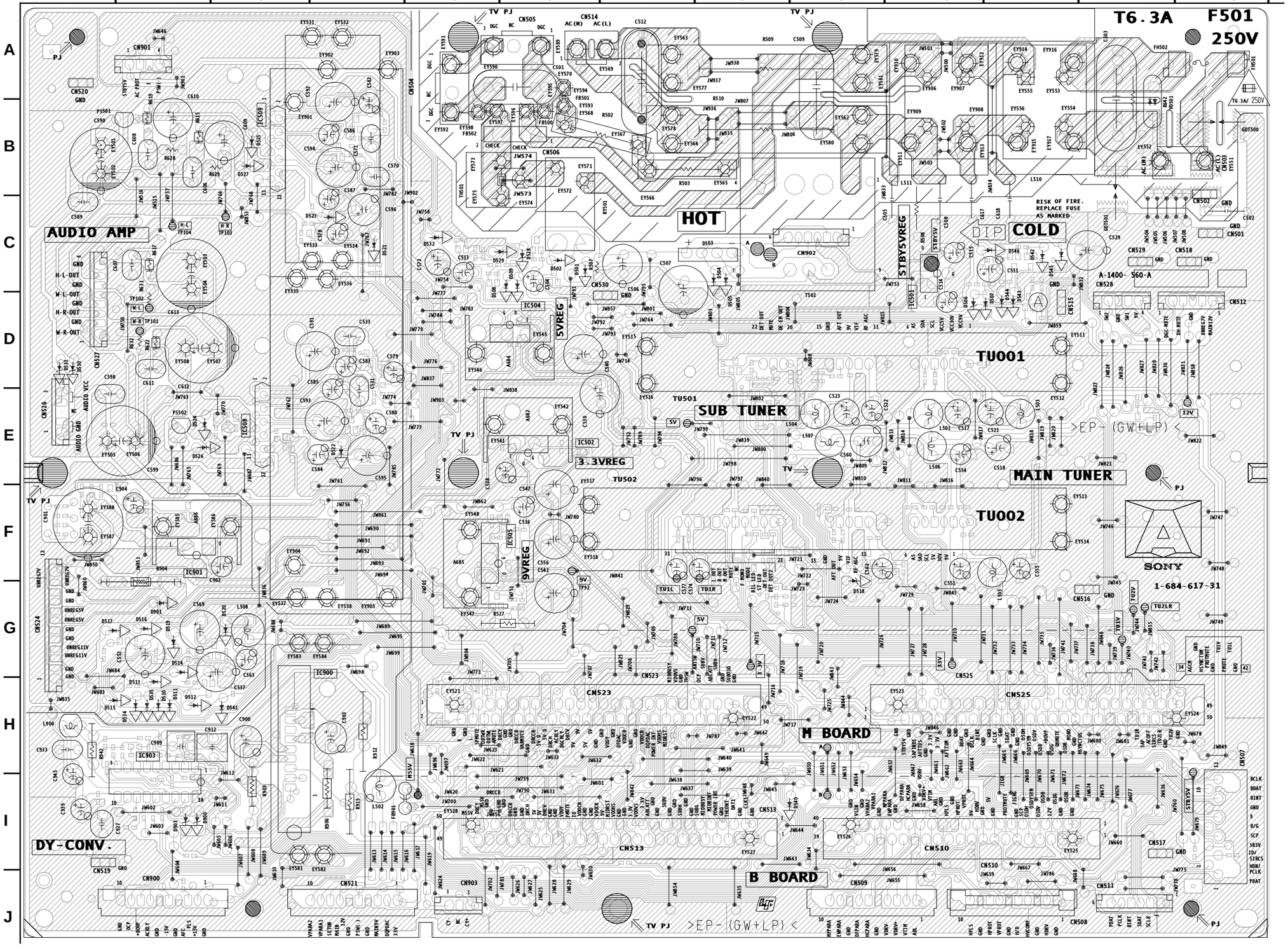
SUBJECT: CORRECTED A PWB

Correct the service manual as shown.
File this Correction with the service manual.

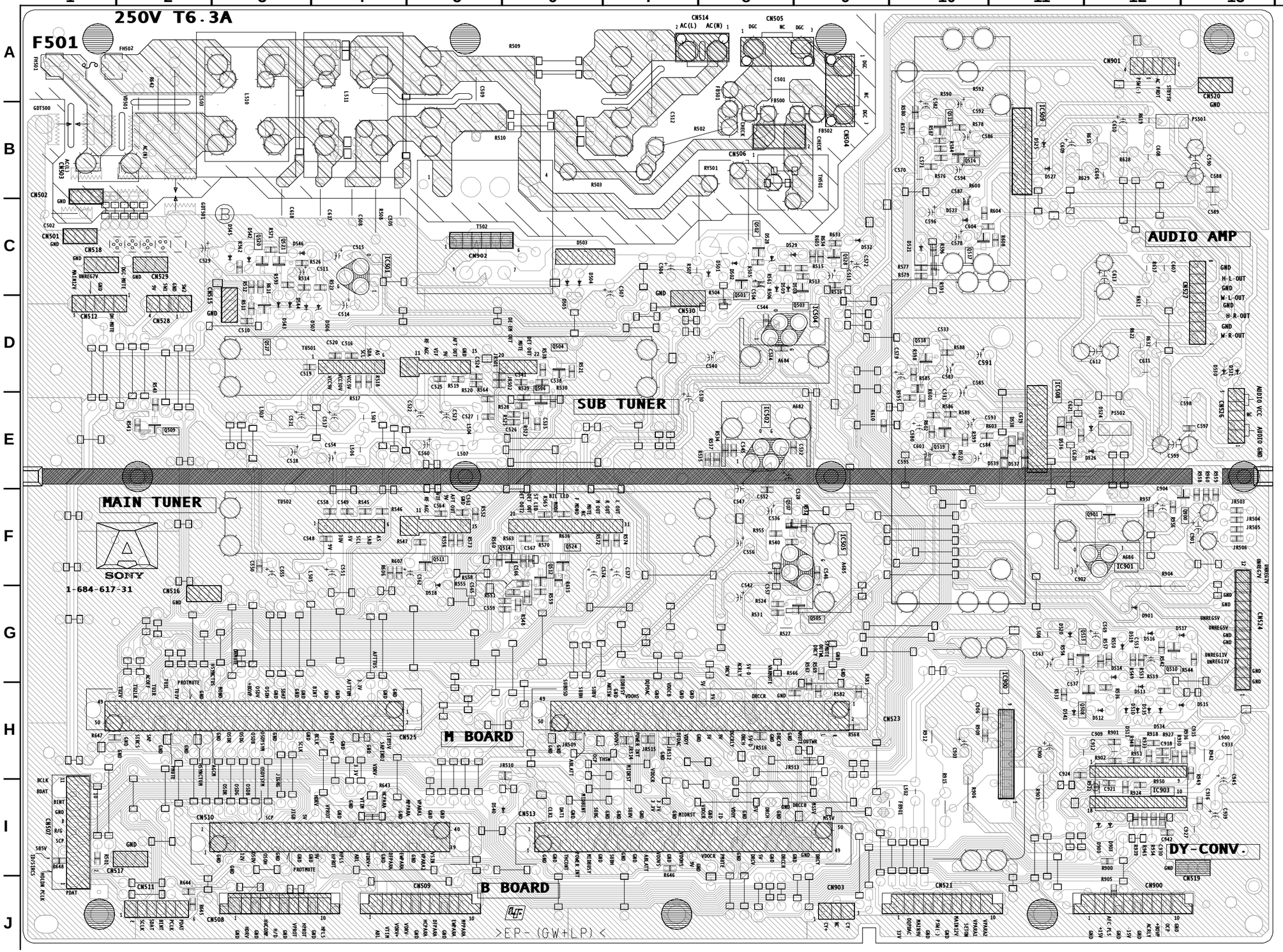
☛ : Corrected Item

Section 5: Diagrams
5-4. Schematics and Supporting Information (Page 75 & 76)

A [AC/DC POWER, AUDIO POWER, TUNER] [COMPONENT SIDE]



A [AC/DC POWER, AUDIO POWER, TUNER] [CONDUCTOR SIDE]



A BOARD LOCATOR LIST

IC		DIODE	
IC501	C-4	D503	C-6
IC502	D-8	D504	C-6
IC504	C-8	D505	C-6
IC505	E-8	D508	C-8
IC508	D-10	D509	C-8
IC901	F-11	D510	G-11
TRANSISTOR		D511	G-11
Q503	C-8	D515	G-11
Q504	D-6	D516	F-11
Q505	F-8	D517	F-11
Q506	D-5	D519	F-11
Q507	E-8	D520	F-10
Q509	E-2	D521	C-9
Q510	G-11	D522	E-9
Q511	F-4	D524	D-11
Q512	F-6	D526	E-11
Q513	F-10	D528	C-7
Q514	F-5	D529	C-7
Q517	C-9	D530	D-12
Q518	D-9	D531	D-12
Q519	E-9	D534	G-11
Q520	C-3	D535	G-11
Q521	C-3	D540	H-5
Q524	F-6	D541	G-10
Q527	C-3	D542	C-3
Q528	C-8	D543	C-3
		D544	C-3
		D545	C-3
		D546	C-3
		D901	F-11

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